

1 BEFORE THE WASHINGTON UTILITIES AND
2 TRANSPORTATION COMMISSION
3 In the Matter of the Continued)
4 Costing and Pricing of) Docket No. UT-003013
5 Unbundled Network Elements and) Volume XLI
6 Transport and Termination.) Pages 4876 to 5064
7 _____)

8 A hearing in the above matter was held on May
9 10, 2002, at 9:00 a.m., at 1300 South Evergreen Park
10 Drive Southwest, Room 206, Olympia, Washington, before
11 Administrative Law Judge LAWRENCE BERG and DR. DAVID
12 GABEL.

13 The parties were present as follows:

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1 P R O C E E D I N G S

2 JUDGE BERG: This is a continued hearing in
3 Docket Number UT-003013. My name is Lawrence Berg. I'm
4 the presiding officer in this case. All counsel present
5 have previously entered appearances. There are no
6 preliminary matters to discuss today, so we will resume
7 the hearing with the testimony of WorldCom witness Sid
8 Morrison.

9
10 (The following exhibits were identified in
11 conjunction with the testimony of SID MORRISON.)

12 Exhibit T-2270 is Direct Testimony of Sid
13 Morrison. Exhibit C-2271 is Spreadsheets showing
14 revisions to Qwest Cost Studies. Exhibit T-2272,
15 CT-2272 is Confidential Supplemental Testimony of Sid
16 Morrison. Exhibit 2273 is Qwest Response to WorldCom
17 Data Request No. 02-352. Exhibit 2274 is Qwest Response
18 to WorldCom Data Request No. 02-353. Exhibit 2275,
19 C-2275 is Qwest Response to WorldCom Data Request No.
20 02-354 and Confidential Attachment. Exhibit 2276,
21 C-2276 is Qwest Response to WorldCom Data Request No.
22 02-355 and Confidential Attachment A. Exhibit 2277 is
23 Qwest Response to WorldCom Data Request No. 02-356.
24 Exhibit 2278 is Qwest Response to WorldCom Data Request
25 No. 02-357. Exhibit 2279 is Qwest Response to WorldCom

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1 Data Request No. 02-358. Exhibit 2280 is Qwest Response
2 to WorldCom Data Request No. 02-359. Exhibit 2281 is
3 Qwest Response to WorldCom Data Request No. 02-362.
4 Exhibit 2282 is Qwest Response to WorldCom Data Request
5 No. 02-363. Exhibit 2283 is Qwest Response to WorldCom
6 Data Request No. 02-364. Exhibit 2284 is Qwest Response
7 to WorldCom Data Request No. 02-365. Exhibit 2285 is
8 Qwest Response to WorldCom Data Request No. 02-366.
9 Exhibit 2286 is Qwest Response to WorldCom Data Request
10 No. 02-367. Exhibit 2287 is Qwest Response to WorldCom
11 Data Request No. 02-368. Exhibit 2288 is Qwest Response
12 to WorldCom Data Request No. 02-369. Exhibit 2289 is
13 Qwest Response to WorldCom Data Request No. 02-370.
14 Exhibit 2290 is Qwest Response to WorldCom Data Request
15 No. 02-371. Exhibit 2291, C-2291 is Qwest Response to
16 WorldCom Data Request No. 02-282 and Confidential
17 Attachment A. Exhibit 2292 is WorldCom's Response to
18 Qwest Data Request No. 16. Exhibit 2293 is WorldCom's
19 Response to Qwest Data Request No. 17. Exhibit 2294 is
20 WorldCom's Response to Qwest Data Request No. 20.
21 Exhibit 2295 is WorldCom's Response to Qwest Data
22 Request No. 21. Exhibit 2296 is WorldCom's Response to
23 Qwest Data Request No. 22. Exhibit 2297 is WorldCom's
24 Response to Qwest Data Request No. 23. Exhibit 2298 is
25 WorldCom's Response to Qwest Data Request No. 24.

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1 Exhibit 2299 is WorldCom's Response to Qwest Data
2 Request No. 25. Exhibit 2300 is WorldCom's Response to
3 Qwest Data Request No. 26. Exhibit 2301 is WorldCom's
4 Response to Qwest Data Request No. 27. Exhibit 2302 is
5 WorldCom's Response to Qwest Data Request No. 28.
6 Exhibit 2303 is WorldCom's Response to Qwest Data
7 Request No. 29. Exhibit 2304 is WorldCom's Response to
8 Staff Data Request No. 15. Exhibit 2305 is WorldCom's
9 Response and Supplemental Response to Staff DR No. 16.
10 Exhibit 2306 is WorldCom's Response and Supplemental
11 Response to Staff DR No. 17.

12

13 JUDGE BERG: Mr. Morrison, if you will please
14 stand and raise your right hand.

15

16 Whereupon,

17

18 SID MORRISON,
19 having been first duly sworn, was called as a witness
20 herein and was examined and testified as follows:

21

22 JUDGE BERG: Thank you, sir.

23

24 D I R E C T E X A M I N A T I O N

25 BY MS. NELSON:

Q. Good morning, Mr. Morrison.

4887

1 A. Good morning.

2 Q. Could you please state your name and business
3 address.

4 A. I'm Sidney O. Morrison, and my business
5 address is 10176 Savannah Sparrow Way, Highlands Ranch,
6 Colorado 80129.

7 Q. Did you file testimony on behalf of WorldCom
8 in this case?

9 A. Yes, I did.

10 Q. And is that direct testimony and supplemental
11 testimony?

12 A. Yes, it is.

13 Q. And there were attachments to that testimony?

14 A. Correct.

15 Q. Those documents have been marked T-2270,
16 CT-2270 all the way through, or I guess actually CT-2272
17 is the only confidential testimony plus a confidential
18 spreadsheet, but all the way through C-2291. Do you
19 have any changes to that testimony at this time?

20 A. Yes, I do, I have one change on my direct
21 testimony, page 17, lines 16 through 20. There may be
22 some pagination differences on my sheet, I seem to have
23 noticed it yesterday. And I would like to change to
24 delete at line 16 where it says:

25 I think we put EASE in --- back in the

4888

1 early 1991-92 time frame, and over that
2 length of time, we have built in a
3 little over 1,000 edits, so once that
4 service order is typed in and it's typed
5 in correctly, then this is where the 99%
6 flow through is achieved.

7 I would like to delete that and add from
8 document -- get the number off of it.

9 Q. Is it the FCC transcript?

10 A. Yeah, of the OSS forum, it is, and we pick up
11 at page 85 that is marked -- it's the only marked one I
12 have the page number.

13 DR. GABEL: The exhibit number?

14 THE WITNESS: In the exhibits, yes.

15 DR. GABEL: What's the exhibit number for the
16 transcript?

17 MS. ANDERL: 2293, Your Honor.

18 THE WITNESS: Yeah.

19 JUDGE BERG: All right, Exhibit 2293 is a
20 Qwest cross exhibit; is that correct?

21 MS. ANDERL: Yes.

22 A. And I would like to insert instead in:
23 Our consumer EASE product permits a 99%
24 flow through of all service orders that
25 are entered by all residential or

4889

1 customer retail operations. We would
2 expect the same flow through from a
3 trained CLEC service rep.

4 BY MS. NELSON:

5 Q. And that's a direct quote from that exhibit?

6 A. Yes, it is.

7 JUDGE BERG: All right, I need some help just
8 finding it on page 85. Approximately where in the page
9 is that, sir?

10 THE WITNESS: Just below the middle, the
11 first sentence in the paragraph says, our consumer EASE.

12 JUDGE BERG: Yes, I do see that.

13 THE WITNESS: And that four line paragraph is
14 what I'm replacing, replacing the four lines in the
15 testimony with four lines in this document.

16 JUDGE BERG: All right.

17 And then, counsel, just to -- I did have a
18 question as to which version of Mr. Morrison's testimony
19 I should be marking as T-2270, and as I explained
20 yesterday, I complicated the choice by detaching the
21 testimonies from the transmittal cover sheets. In
22 looking at the version that I thought was the correct
23 version, looking at page 17, the start of the passage
24 that Mr. Morrison is referring to at line 16, does that
25 start in the middle of line 16 on page 17?

4890

1 MS. NELSON: Yes.

2 JUDGE BERG: Commenting on how?

3 MS. NELSON: Yes.

4 JUDGE BERG: Okay, got it, all right.

5 MS. NELSON: It's actually on my version it's

6 line 15, the middle of line 15 is where it starts,

7 commenting on how.

8 JUDGE BERG: Commenting on how is on line 15

9 in your version?

10 MS. NELSON: Yes.

11 JUDGE BERG: All right.

12 MS. NELSON: And then it goes down through

13 line 20.

14 JUDGE BERG: All right, I will have to find

15 the line 15 version.

16 MS. TENNYSON: I have two versions, and

17 they're both in the middle of line 15.

18 MS. ANDERL: Your Honor, I know for a fact

19 that we made a note on it. I'm working off of the one

20 that was provided on the 28th of March when WorldCom

21 corrected their testimony.

22 MS. NELSON: And that's what I'm working from

23 as well.

24 JUDGE BERG: All right, because both --

25 MS. ANDERL: But there's no indication on the

4891

1 testimony that it is the revised version. I only know
2 because we hand wrote a note on the cover page the day
3 we received it.

4 JUDGE BERG: Well, this seems like probably
5 as good a benchmark as any. I have two versions, and in
6 both of my versions the sentence beginning commenting on
7 how in one version starts on line 16, and in the other
8 version it begins on line 17, so there will be a line 15
9 version somewhere. Maybe one easy way to resolve this
10 is on a break, Ms. Singer-Nelson, if you have a clean
11 copy that doesn't have your notes, I can make a copy.
12 Otherwise, we can make some arrangements.

13 MS. NELSON: Okay.

14 JUDGE BERG: All right.

15 MS. NELSON: Are you looking at the
16 proprietary or non-proprietary version?

17 JUDGE BERG: Oh, I always look at proprietary
18 versions.

19 MS. NELSON: Good, okay, I thought maybe that
20 was an explanation.

21 MS. TENNYSON: Just to clarify, we do have
22 proprietary and non-proprietary versions of this
23 testimony or not? I thought you said we don't. I just
24 don't know what --

25 MS. NELSON: The attachment is proprietary,

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1 the testimony itself is not proprietary.

2 JUDGE BERG: All right.

3 MS. NELSON: And so the front page says
4 proprietary on it if the attachment is proprietary.

5 MS. TENNYSON: Okay.

6 JUDGE BERG: And the reason for conducting
7 this discussion on the record was just in case other
8 counsel had similar questions.

9 What I would request is that with regards to
10 the strike and insertion with regards to T-2270, even
11 though we're picking up language out of another exhibit
12 that's been marked for the proceeding 2293 at page 85,
13 what I would like is to have an errata sheet submitted,
14 and the errata to Morrison direct testimony will be
15 marked as Exhibit 2307. Let's be off the record for a
16 second.

17 (Discussion off the record.)

18 JUDGE BERG: The errata to direct testimony
19 of Mr. Morrison will be marked as Exhibit E-2270.

20 BY MS. NELSON:

21 Q. Mr. Morrison, do you have any other changes
22 to your testimony?

23 A. No, that's all.

24 Q. Is it otherwise true and correct to the best
25 of your knowledge and belief?

4893

1 A. Yes, it is.

2 MS. NELSON: I move for the admission of
3 T-2270 through C-2291.

4 MS. ANDERL: No objection.

5 JUDGE BERG: All right, and that will include
6 E-2270, those exhibits are admitted.

7 MS. NELSON: Thank you. Mr. Morrison is
8 available for cross.

9

10 C R O S S - E X A M I N A T I O N

11 BY MS. ANDERL:

12 Q. Good morning, Mr. Morrison.

13 A. Good morning.

14 Q. I'm Lisa Anderl, one of the attorneys for
15 Qwest, I will be asking you some questions today.

16 MS. ANDERL: First, Your Honor, I would like
17 to address the cross-examination exhibits and offer some
18 of those and simply get those out of the way. I don't
19 know if Ms. Singer-Nelson has had a chance to review
20 those and can stipulate to their admission.

21 MS. NELSON: I can stipulate to their
22 admission.

23 MS. ANDERL: Okay. The only ones I want to
24 offer at this time are 2292, 2293, which is the
25 transcript we were just talking about, 2295, 2296, 2298

4894

1 and 2299.

2 JUDGE BERG: All right, Exhibits 2292, 2293,
3 2295, 2296, 2298 and 2299 are admitted.

4 MS. ANDERL: Thank you.

5 BY MS. ANDERL:

6 Q. Mr. Morrison, have you testified in
7 Washington before?

8 A. No, I have not.

9 Q. Can you describe for me what, if anything,
10 you did to familiarize yourself with Washington cost
11 dockets or cost docket orders before testifying here
12 today?

13 A. I read the testimony of the Qwest witnesses
14 which have gone before and reviewed the cost study
15 submitted by Qwest and all the associated documentation.

16 Q. And that's in this phase of the proceeding?

17 A. That's correct.

18 Q. Okay. And when you say you reviewed the cost
19 study, are you referring to Ms. Million's nonrecurring
20 cost study?

21 A. Correct.

22 Q. You didn't review any of the other cost
23 studies?

24 A. No, I don't believe I did.

25 Q. Okay. Did you read the discovery responses

4895

1 that Qwest provided to WorldCom's data requests?

2 A. Yes, I did.

3 Q. Okay. And did you also read WorldCom's
4 responses to Qwest's data requests to the best of your
5 recollection?

6 A. I did.

7 Q. Mr. Morrison, you filed two pieces of
8 testimony here for purposes of this proceeding; did you
9 draft that testimony?

10 A. Yes, I did.

11 Q. And did you prepare your own exhibits?

12 A. Yes.

13 Q. Were you assisted by anyone in that
14 preparation?

15 A. Yes, I was, Mr. Gose, Peter Gose.

16 Q. And what did Mr. Gose do to assist you?

17 A. Mr. Gose helped with the analysis of the
18 nonrecurring cost study.

19 Q. How did he help?

20 A. He assisted me working my way through the
21 process that the study uses. He showed me how, in this
22 particular case, how the math function, where the
23 information is located. I did the interpretation of a
24 large part of the information, most of the information
25 in the cost study.

1 Q. Prior to your review of Qwest's cost study in
2 this proceeding, had you reviewed a nonrecurring cost
3 study prepared by an ILEC?

4 A. Yes, I have.

5 Q. In what context?

6 A. Similar circumstances, similar types of cost
7 studies.

8 Q. I would like to ask you about the correction
9 or change you made to your testimony where you struck a
10 quote on page 17 and inserted some new language, why did
11 you make that change?

12 A. I had multiple pieces of information on the
13 issue, and when I prepared my testimony, in the process
14 of sorting out the data, I referred to one document,
15 being the one I have here, and took the quote from
16 another. Now they both have very similar information in
17 it, so for the sake of convenience and accuracy as far
18 as the relationship between the documents, I took a
19 similar quote that addressed the same issue out of the
20 current document and inserted it in place of what I will
21 call an incorrect quote for purposes here.

22 Q. And did you identify that as an issue after
23 you read one of Qwest's witnesses' testimony, or was
24 there some other way that you learned that you needed to
25 make that correction?

4897

1 A. No, as a matter of fact, I found it I believe
2 yesterday sometime or day before yesterday going through
3 the testimony and suddenly realizing that the quote in
4 the testimony didn't match the quote that I expected to
5 see in the document that was filed.

6 Q. Did you read Ms. Albersheim's testimony in
7 this docket?

8 A. Yes, I did.

9 Q. Do you recall Ms. Albersheim stating that she
10 had reviewed the FCC transcript and at that time was
11 unable to find the quote that you attributed to
12 Ms. Hamm?

13 A. I remember that particular part of her
14 testimony; however, it didn't ring true as an issue,
15 because I didn't know to what extent she may have
16 searched for it.

17 Q. Then when you checked yourself, you found
18 that, in fact, her testimony was accurate; is that
19 right?

20 A. Yes, I did.

21 Q. Have you talked to Ms. Hamm about the EASE
22 system?

23 A. No, I have not.

24 Q. Is it correct that the flow through that
25 Southwestern Bell was referring to in Ms. Hamm's

4898

1 testimony is flow through of the ordering process only
2 and not provisioning?

3 A. Yes, that's true, and to that point, the
4 reason I used it as -- for demonstration purposes was to
5 illustrate that in a system it's capable to work --
6 capable -- you are capable of arriving at a high
7 percentage of flow through with very little manual
8 intervention. I wanted to illustrate that there is the
9 capability to do just that.

10 MS. ANDERL: Your Honor, I would move to
11 strike the response after yes. That was not a question
12 that called for an explanation. It was simply a yes or
13 no question.

14 MS. NELSON: Judge, I think Mr. Morrison was
15 responding to the question. He said yes, and then he
16 provided explanation. Qwest's witnesses do that all the
17 time, and I didn't see that there was anything
18 nonresponsive to his response.

19 JUDGE BERG: All witnesses do this all the
20 time. I think the extra response was in the context of
21 the question that was asked. The objection is
22 overruled.

23 MS. NELSON: Thank you.

24 BY MS. ANDERL:

25 Q. Mr. Morrison, would you agree that the

4899

1 ordering process and the provisioning process are two
2 separate processes?

3 A. Yes, I would, very separate.

4 Q. And it is appropriate to distinguish between
5 ordering and provisioning in certain instances when
6 you're talking about flow through? In other words, you
7 could have flow through for one process but not the
8 other?

9 A. If you -- yes, there are those occasions
10 where you would differentiate between the ordering
11 process and the provisioning process.

12 Q. And, in fact --

13 A. However, that is from what I consider to be
14 past methods of operation, not forward looking methods
15 of operation. If you look at what the capabilities are
16 today with systems and integration systems, you find
17 that those two processes begin to merge. They merge in
18 a number of service offerings as wire line as well as
19 wireless.

20 Q. Mr. Morrison, let's look at a simple order
21 for plain old telephone service, if you will. Is it
22 correct that if an order is placed by a CLEC for POTS
23 either via UNE-P or resale, that order could fail to
24 flow through the ordering process if the CLEC submitted
25 an order with errors on it?

4900

1 A. That would be true if -- if there are errors
2 on the order received from the CLEC.

3 Q. Is it also true that the order would not flow
4 through the ordering process if the order was submitted
5 manually via facsimile or mail?

6 A. As far as the initial receipt of the order,
7 yes, you would not flow from any mechanized interface or
8 system that delivers the service request from the CLEC.
9 But there is a point of input to your process within the
10 ILEC, and from that point forward, then you are in the
11 ordering and provisioning mode that ILECs like Qwest
12 use.

13 I understand from the testimony given here
14 that the assumption is that we have a perfect order, so
15 to speak, at the point of input when Qwest starts their
16 ordering provisioning process. If you go to
17 Ms. Million's testimony, she indicates --

18 MS. ANDERL: Your Honor, I'm going to ask
19 that the witness be stopped in his response and moved to
20 strike. This is totally unresponsive. I did not ask
21 for an explanation, nor do I think that the question
22 once answered warranted this additional dialogue.

23 JUDGE BERG: There was some explanation after
24 the answer which was appropriate. The additional
25 reference to the testimony, to Ms. Morrison's

4901

1 testimony --

2 MS. NELSON: Ms. Million.

3 JUDGE BERG: -- probably takes the response a
4 little off base, Mr. Morrison. Your counsel will have
5 an opportunity to ask you questions on redirect.

6 I do want to make it clear to everyone here
7 that I want to hear information explaining responses.
8 We are not going to change the process of this hearing
9 on the last day, and this is for witnesses as well as
10 for counsel. However, the purpose of this hearing is to
11 provide information to the Bench that will be helpful
12 for making a decision. I expect that counsel will be
13 understanding of the need for witnesses to explain
14 responses, and I expect witnesses to exercise a little
15 bit of self restraint and just understand that a
16 question requires an answer and an explanation but that
17 it's not an opportunity to otherwise engage in a roaming
18 conversation.

19 THE WITNESS: Yes, sir, thank you.

20 JUDGE BERG: All right, thank you, sir.

21 MS. ANDERL: Thank you, Your Honor, it's
22 certainly not my intent to cut off or preclude a
23 legitimate explanation of an answer.

24 JUDGE BERG: We know that often these sorts
25 of issues, if they're not addressed, if they're not

4902

1 explained when asked, will just result in extensive
2 redirect, and it's partly in the interests of an
3 efficient proceeding, and it's not intended to either
4 disadvantage or advantage either party.

5 MS. NELSON: Thank you, Judge.

6 BY MS. ANDERL:

7 Q. Mr. Morrison, one final question for now on
8 the flow through issues. Is it your understanding that
9 the EASE, E-A-S-E, system referred to by Southwestern
10 Bell is an ordering system for residential POTS service
11 only?

12 A. No, I don't understand it to be that at all.
13 I understand that it is now in use with the CLECs, that
14 they are using it as an ordering system.

15 Q. Right, for residential POTS service?

16 A. At least that.

17 Q. Mr. Morrison, let me ask you a little bit
18 more about your background. You stated in your
19 testimony that you went to Malaysia to help build a CLEC
20 network; is that right?

21 A. Yes, I did.

22 Q. Which CLEC?

23 A. The marketing name of the CLEC there was a
24 company called diAx, D-I-A-X.

25 Q. D-I capital?

4903

1 A. No, D small, A capital.

2 Q. Lower case D, lower case I, Capital A --

3 A. Capital A.

4 Q. -- lower case X.

5 A. Lower case X, yes.

6 Q. Are they still in business in Malaysia?

7 A. Yes, they are.

8 Q. How many customers were intended to be served
9 by the network that you helped to build?

10 A. Would be in the -- in the end hundreds of
11 thousands.

12 Q. Less than a million?

13 A. Probably not, it could approach a million or
14 in excess.

15 Q. Wireless or wire line?

16 A. Both.

17 Q. On page 4 of that same testimony, you
18 indicate what I now believe to be the same company that
19 you worked for in Malaysia as a business that you went
20 to work for in Switzerland; is that right?

21 A. Yes.

22 Q. DiAx?

23 A. Oh, excuse me, I gave you the incorrect name
24 of the company in Malaysia, Maxus, Maxus. My mind was
25 in Europe, and you were in Malaysia.

4904

1 Q. I would prefer to be with you. Can you spell
2 the name of that Malaysian CLEC?

3 A. M-A-X-U-S.

4 Q. Are they still in business?

5 A. Yes, they are.

6 Q. And then in Switzerland, you went to work
7 helping a company by the name of diAx that we just
8 spelled?

9 A. That's right.

10 Q. All right. Are they still in business?

11 A. Yes, they are.

12 Q. Okay.

13 A. Oh, excuse me, they are and they are not.

14 They were bought out by Sunrise in approximately
15 November of 2000.

16 Q. Is Sunrise still in business?

17 A. Yes, they are.

18 Q. And was -- let me back up. In Malaysia, were
19 you constructing a network from the ground up, or were
20 you working to augment an existing network?

21 A. Ground up.

22 Q. What about in Switzerland?

23 A. Ground up.

24 Q. And was it for purposes of business in that
25 country, in Switzerland?

4905

1 A. Correct.

2 Q. And how many customers were intended to be
3 served by the network that you helped work on?

4 A. The forecasts that we were working from
5 pushed us in the total network services for the ending
6 roughly 2000, somewhere in the neighborhood of about
7 500,000 customers.

8 Q. Do you know how many customers Maxus
9 currently serves?

10 A. No, I don't.

11 Q. Approximately?

12 A. Based on projections that I saw when I left,
13 assuming that they met their business plan, I would say
14 probably two million, a million and a half, two million.

15 Q. For what reason do you assume that they met
16 their business plans?

17 A. I don't know that they didn't, but I don't
18 know that they did.

19 Q. Do you know how many customers diAx currently
20 serves?

21 A. No, I don't, because it rolled over into
22 Sunrise and then a lot of network configurations took
23 place, and then the customers were sort of in the
24 combination network.

25 Q. Are you appearing here today, Mr. Morrison,

4906

1 as a costing expert?

2 A. No, not from the perspective of costing of
3 any kind of economic analysis, but from the perspective
4 of the network architecture, the OSS's that support
5 provisioning, and the work tasks and work items within
6 those tasks and times that make up the cost study, in
7 other words, the things that initiate the cost in the
8 cost study.

9 Q. Other than the experience that you described
10 earlier in reviewing ILEC nonrecurring cost studies, in
11 other words, Qwest's nonrecurring cost study for the
12 purpose of this proceeding and similar prior
13 proceedings, do you have any other experience reviewing
14 ILEC cost studies?

15 A. Are you talking about my experience within
16 the last year and a half since I went to work for QSI,
17 is that where we're headed?

18 Q. I'm asking you whether you have any
19 experience in reviewing ILEC cost studies other than you
20 have already described in answer to my prior questions?

21 A. Yes, I have reviewed some Verizon cost
22 studies. I reviewed other Qwest cost studies
23 specifically in New Mexico, Colorado.

24 Q. And the New Mexico and Colorado cost studies,
25 were those both the nonrecurring cost studies?

4907

1 A. Yes.

2 Q. And the Verizon cost studies, what types of
3 cost studies were those?

4 A. Nonrecurring.

5 Q. Any other experience?

6 A. Wisconsin, New Jersey, to name a couple off
7 the top of my head right now.

8 Q. All nonrecurring cost studies?

9 A. Yes.

10 Q. Do you have any experience with the
11 development of TELRIC costing models?

12 A. No, I don't.

13 Q. Do you have any experience or expertise in
14 knowing whether certain costs incurred by an ILEC or
15 projected to be incurred are shared costs, direct costs,
16 or common costs?

17 A. No, I don't.

18 Q. And do you have any experience or expertise
19 in knowing whether such costs are properly recoverable
20 under a TELRIC analysis?

21 A. The ones that you just specifically named?

22 Q. Yes.

23 A. No, I don't.

24 Q. You may want to look at your testimony for
25 these following references, your December testimony that

4908

1 is Exhibit 2270. You make a number of references to the
2 most efficient technology available. Specifically on
3 page 7, lines 11 and 12, you say, the most efficient
4 telecommunications technology currently available; on
5 page 8, line 11, you reference the most efficient
6 technology available, and again on that page at lines 18
7 and 19. Can you please explain what you mean by the
8 most efficient technology available?

9 A. In this case, I'm referring to technology
10 that's used in all of the facets of ordering and
11 provisioning from you receive the order from the
12 customer to handover of completed service to the
13 customer. The technologies that revolve around not only
14 the Legacy systems but new technology, forward looking
15 technology, that has the ability to take over control of
16 those systems, look at technology that goes out into the
17 field to central offices, to SAI's, FDI's, cross connect
18 field, cross connect points, and improve the
19 capabilities at those points.

20 Q. What do you mean by most efficient?

21 A. The most efficient would be the best
22 available technology at the time that will improve the
23 processes and are reasonable to install and become part
24 of the process, in other words, the capabilities that
25 you can put in place but may not have yet gotten to.

4909

1 Q. You haven't yet, Mr. Morrison, mentioned
2 anything about the cost of that technology. When you
3 say the most efficient technology available, do you mean
4 to include a consideration that that technology is also
5 on balance the least cost, or are you not considering
6 that element?

7 A. Having installed some of that type of
8 technology, I have some understanding of how the cost
9 functions. To say specifically that it would be cost
10 effective in Qwest's circumstances, what I would say is
11 you have to at least consider it, you have to at least
12 apply it to your processes and make that determination.
13 I would say based on my experience since these systems
14 are very much scalable, that yes, there probably is some
15 of this technology that you can certainly use.

16 Also, the technology itself, as it becomes
17 embedded in networks, the cost begins to descend. The
18 typical cost of electronics, the difference in the cost
19 of a VCR 15 years ago and a VCR today. So the downward
20 spiraling cost makes this more and more effective, but
21 you can never generate the downward spiraling cost
22 without initiating the process, in other words,
23 installing the equipment, embedding it in your network.

24 Q. Have you included in your testimony anywhere
25 any specific cost analysis with regard to the benefits

4910

1 or efficiencies or costs associated with the most
2 efficient technology that you just described? In other
3 words, have you quantified the costs of the technology?

4 A. To quantify the costs of the -- to answer
5 your question, no. To quantify the costs of the
6 technology would require that you get into the user of
7 the technology, in this case it would be Qwest, and have
8 access to a heck of a lot of information that I just
9 don't have access to today before you could ever make
10 that determination. And you would -- and it would also
11 require an effective business plan to be written to
12 implement that type of technology.

13 Q. Mr. Morrison, could you flip in your
14 testimony, thank you for that explanation by the way,
15 could you turn in your testimony to page 11.

16 A. I'm there.

17 Q. And thank you, by the way, for spelling out
18 the acronyms that you used in that section of your
19 testimony. You discuss there a number of OSS platforms
20 starting at line 12; is that correct?

21 A. Yes, it is.

22 Q. Do we have the same pagination?

23 A. I think so.

24 Q. Examples of these OSS platforms include?

25 A. Yes.

4911

1 Q. Okay. I want to walk you through each one of
2 these and ask you a couple of questions about each of
3 them, and I want to ask you, so you know, whether each
4 of these is in your mind efficient technology and
5 whether you are aware of whether or not Qwest has this
6 technology or OSS capability in its network today; is
7 that fair?

8 A. Sounds good.

9 Q. All right, good. The first bullet point on
10 line 13 is work and force administration control or is
11 something that we refer to as WFA/C, is this in your
12 mind an efficient or forward looking technology for OSS?

13 A. Yes, it is.

14 Q. And to your knowledge, does Qwest employ
15 WFA/C in its operations?

16 A. It does.

17 Q. What about WFA/DI, does it --

18 A. To the best of my knowledge, they do as well
19 employ that, and it is efficient OSS.

20 Q. What about WFA/DO?

21 A. I would agree to that.

22 Q. What about the acronym all caps MARCH,
23 M-A-R-C-H, memory administration and I believe the rest
24 of the acronym the R may stand -- RC may stand for
25 recent change?

4912

1 A. Yes, they either use a MARCH or a very
2 similar system, and those types of systems, as typically
3 as Qwest deploys its systems, they are for the most part
4 I would agree very forward looking individual stand
5 alone systems.

6 Q. And what about the provisioning analyst work
7 station or PAWS, P-A-W-S?

8 A. Yes, I would agree with that.

9 Q. And the last two, SWITCH, S-W-I-T-C-H, is
10 that forward looking and employed by Qwest?

11 A. Yes, those two I believe are employed by
12 Qwest, and I would agree that those two as well as all
13 that went before are very much forward looking OSS.
14 They do not incorporate additional concepts that are
15 available now and systems applications that in the end
16 can integrate these systems.

17 What I propose with some of the terminology
18 that I have used in my testimony is not that these
19 systems are not 100% effective as they stand, but that
20 there's technology available that improves their
21 performance tremendously. It integrates the systems,
22 and it also manages the business process. You can
23 integrate systems with a number of interfaces system to
24 system, but you also have to gain control over the
25 business process that manages these systems. Work flow

4913

1 managers, work flow engines, those are the latest in
2 technology.

3 I have deployed some of these systems, well,
4 one of these systems in Switzerland, and it integrates
5 the business process in all of the systems such that the
6 myriad of systems that make up the provisioning process
7 now begin to appear as one, and we minimize the manual
8 tasks involved in taking information from one system,
9 duplicating it in another, with interfaces, by
10 standardizing interfaces in systems.

11 So you have an application that basically
12 sets above these as a high level control application,
13 and basically you take your business process, program it
14 in as an algorithm, it begins to take over control of
15 your business. It also compresses your organization, it
16 allows your organization to become narrower in scope.
17 You take -- departments begin to disappear because the
18 processes that they manage are integrated into a single
19 system.

20 And as your business process changes --

21 JUDGE BERG: I think you -- I understand the
22 point you're making, that this is the distinction you
23 make regarding an efficient system, and I'm cognizant
24 that while this is related, I think you have made that
25 point, and I want to be fair to counsel and invite your

4914

1 attorney to follow up if other information is necessary.

2 THE WITNESS: Okay, thank you.

3 JUDGE BERG: Thank you for that explanation
4 of your concept of efficiency in the context of those
5 systems.

6 THE WITNESS: Yes, sir.

7 BY MS. ANDERL:

8 Q. Mr. Morrison, I have some questions to come
9 here about some specific recommendations that you make.
10 Before we get to that, I would like to clarify your
11 general recommendation to the Commission. And on pages
12 7 and 8 of your Exhibit 2270, it appears as though you
13 are simply recommending the Commission require Qwest to
14 refile its cost studies based on some of the adjustments
15 that you provide here. Is that your recommendation, or
16 alternatively, and let me give you the follow-up
17 question so that you can kind of respond, are you asking
18 the Commission to order from this proceeding specific
19 new costs for Qwest based on your recommendations?

20 A. I would recommend that new costs be developed
21 as a result of the considerations of these changes in
22 technology that I have suggested so far as well as some
23 other additional issues with -- that revolve around the
24 current times in the cost study.

25 Q. Let's turn to your testimony, please, at page

4915

1 26 and going on to 27, and then I will also want you to
2 have before you Exhibit 2271, which is your spreadsheet.
3 Do you have that?

4 A. Yes, I do.

5 Q. Did Mr. Gates assist you in the preparation
6 of this spreadsheet Exhibit 2271, or Mr. Gose rather?

7 A. Mr. Gose, yes, he did.

8 Q. Sorry, I misspoke. What exactly did he do;
9 did he just set it up for you, or did he perform other
10 functions as well?

11 A. No, this particular spreadsheet I set up.

12 Q. How did he assist you then, just in the way
13 that you described earlier?

14 A. Yes, his role was to make sure that I really
15 understood the nuances of the cost study.

16 Q. Now let me just ask you, and I think I would
17 -- I may have been working off of a different version of
18 your testimony, because now my pagination isn't matching
19 up.

20 MS. ANDERL: Your Honor, if I could just have
21 a moment to find my -- oh, here it is, never mind.

22 BY MS. ANDERL:

23 Q. Mr. Morrison, let me just clarify something
24 with you. If you look at page 27, line 5, you indicate
25 that you are recommending that a work time for testing a

4916

1 circuit be adjusted to ten minutes. Do you see that?

2 A. I see that.

3 Q. Turn to the first page of Exhibit SLM-1 or
4 Exhibit 2271. On page 1, column A, about halfway down
5 there's the words test circuit in all capital letters;
6 is that right?

7 A. Yes.

8 Q. And as you follow that line across through
9 the various columns, is it correct that in your
10 spreadsheet you have actually adjusted the time from 25
11 minutes down to 12 1/2 and not 10?

12 A. Yes, I see that.

13 JUDGE BERG: Before you go on, I'm sorry to
14 interrupt, is this also numbered page 35 of 42?

15 MS. ANDERL: It may be in another version,
16 Your Honor, of the testimony when it was paginated with
17 the testimony.

18 JUDGE BERG: All right.

19 MS. ANDERL: Is that right, Michel?

20 MS. NELSON: Yes.

21 JUDGE BERG: Thank you.

22 BY MS. ANDERL:

23 Q. Can you explain, Mr. Morrison, the
24 discrepancy there?

25 A. I think you have found an inconsistency in my

4917

1 spreadsheet.

2 Q. So if you had to correct one or the other,
3 you would correct in column F as far as you're concerned
4 and take that 12.5 and change it to 15; is that right?

5 A. Yes.

6 Q. Have you ever in your work history,
7 Mr. Morrison, tested a DS1 circuit?

8 A. Yes.

9 Q. So you agree that testing of DS1 circuits is
10 appropriate, is that right, prior to delivery to the
11 customer?

12 A. Yes, testing is appropriate. Testing is one
13 of these things that all things having gone correctly
14 before is typically a very quick, efficient process.
15 Testing typically is extended when there are problems
16 that have gone before.

17 In the context of this cost study, the
18 assumptions that go into the Qwest cost study are that
19 there are no problems ahead of the testing process. You
20 start off with a accurate order, and all of the
21 processes that take place up to turnover to the customer
22 in the cost study are indicated to be perfect, and the
23 indication is that there are no charges for corrections
24 or changes or clearing troubles, those sorts of things,
25 in the cost study, and that's per Ms. Million's

4918

1 testimony.

2 So that being correct, that we have a perfect
3 order and a relatively perfect process, when it comes to
4 testing time, now we have -- we should have a test run,
5 and it should be a very short duration test, because
6 there's nothing to clear up, we do not have problems.

7 Q. What kind of a test or tests are necessary to
8 be run on a DS1 to ensure a good circuit for delivery?

9 A. You may choose to run byte error tests, byte
10 error rate tests, protocol tests, there are an array of
11 tests. It would just be what is agreed on both
12 internally with Qwest, what their policies are, as well
13 as maybe any other external agreements that might exist
14 in this case maybe with the CLEC.

15 Q. So a byte error rate test?

16 A. That would be one.

17 Q. And a protocol test?

18 A. Potentially.

19 Q. And a DS1 loop has a certain set of technical
20 specifications or parameters that it has to meet; is
21 that right?

22 A. That's correct.

23 Q. I said loop, strike that, I meant circuit;
24 would your answer be the same?

25 A. Loop, circuit, yes, they're both have

4919

1 requirements.

2 Q. And in your experience, are those standards
3 generally contained in tech pubs and other standards
4 type of publications?

5 A. You're talking about the testing or the
6 requirements for the circuit or loop?

7 Q. The requirements for the circuit or loop.

8 A. Yes.

9 Q. And does a byte error rate test, does that
10 have to run for a specified period of time in order to
11 ensure that you have run the test appropriately and get
12 a valid result?

13 A. Yes, it does.

14 Q. How long typically does that test have to run
15 for?

16 A. Again, that would depend a lot on what the
17 provider of the service, what error rate they want to
18 offer, so it would be a policy issue.

19 Q. Is there a range that you can state, a
20 minimum of X number of minutes or a maximum of X number
21 of minutes?

22 A. Right off the top of my head, I don't
23 remember the time frames.

24 Q. Would you accept subject to your check that
25 depending on the technical specifications or parameters

4920

1 desired that a byte error rate could be required to be
2 run for up to 20 or 30 minutes?

3 A. Could be.

4 Q. Mr. Morrison, when you have the time for ten
5 minutes allowed to test the circuit, I would like to
6 explore with you a couple of areas in terms of what
7 exactly you include in that time period. Do you take
8 and include within the ten minutes the time it takes for
9 the tester to receive the order?

10 A. No, and it appears that from the information
11 provided in this cost study that the technician has
12 already received the order.

13 Q. Where does it say that?

14 A. The technician is dispatched, so we're
15 looking at a field technician as an example, he's
16 dispatched with a packet of orders. It's typically in
17 my experience that's the way it happens, and/or he's
18 receiving the order maybe over a mechanized order
19 delivery system that typically stores and forwards the
20 information that the tech would have access to. If the
21 tech is a central office based technician, he would
22 typically have the orders extracted from a OSS system,
23 maybe a TIRK system probably in this case. If it's say
24 a different type of circuit, it could come out of a
25 SWITCH system or the equivalent of what I used to call

4921

1 or still do refer to an old Cosmo system.

2 Q. Do you include within that ten minutes for
3 testing the time it takes to set up prior to the test?

4 A. What would be your definition of set up?

5 Q. Well, is there anything required for the
6 central office or field technician to do to get his or
7 her equipment ready to run the test required?

8 A. Yes, there is, and there are a number of test
9 set varieties on the market today. They're designed
10 very specifically for the industry to accelerate these
11 types of task. Fluke, I think Hykemian, if I had access
12 to some reference material, I could probably come up
13 with a number of other vendors that deal with small
14 programmable hand held test sets that technicians can
15 attach quickly to a circuit, quick set up time, and
16 their very purpose is to do what we're talking about.

17 Q. Sure.

18 A. Minimize the time involvement in testing.

19 Q. And in your answer, you just used the phrase
20 set up time, and so when I ask you, did you include in
21 the ten minutes the time it takes to set up for the
22 test, can you now answer that yes or no?

23 A. Well, I did, but I don't necessarily
24 understand what your definition of set up might turn out
25 to be.

4922

1 Q. But as you just used the phrase, you include
2 within that ten minutes the time it actually takes to
3 set up?

4 A. Correct.

5 Q. What about the time it takes to record the
6 results, do you include that within the ten minutes for
7 testing the circuit?

8 A. In today's world, a significant number of the
9 test sets available store that data for the technician.

10 Q. What about the time it takes to communicate
11 the results to anyone within Qwest or at the CLEC, if
12 necessary, do you include that time within the ten
13 minutes?

14 A. It is there, but probably because, well, not
15 probably, but because we're looking at a forward looking
16 network, it happens through different processes since
17 technicians today are typically in a forward looking
18 network dispatched with automatic communications
19 systems, for instance, wireless notebooks as an example,
20 that communicate with their test gear, then in turn can
21 communicate with the operational support system. In
22 those scenarios, there -- that is the communications
23 mechanism, the operational support systems, which in
24 turn is -- would be the communication process or method
25 throughout the organization for provisioning ordering in

4923

1 this case.

2 Q. And so you're making all of those assumptions
3 in your testimony that it's appropriate to include only
4 ten minutes for testing?

5 A. In this case on the average that would be
6 true.

7 Q. And are you aware of whether or not all of
8 those wireless communications devices and automatic
9 transmission of information methods that you just
10 described are in place in Qwest's network with regard to
11 testing?

12 A. I would say that most likely today there may
13 be some of them in the network. I would not expect to
14 see that they proliferate yet in Qwest's network. I'm
15 referring to these in the context of the forward looking
16 efficient OSS.

17 Q. Mr. Morrison, I understand that your column E
18 on this page, or rather this exhibit, is an adjustment
19 to Qwest's various work times to reflect the elimination
20 of all of the items, work items, that are identified as
21 verify, validate, and check; is that right?

22 A. That's correct.

23 Q. And is it correct that you simply took each
24 work item identified as a verified, validate, or check
25 work item and reduced the time to zero?

1 A. That would be correct.

2 Q. And in column F you state that you made an
3 adjustment to other work item times, and you adjusted
4 minutes there. And in column F at the top of the column
5 it says see note 3, and if we go to note 3 on page 13,
6 it explains that those were work items with time
7 adjustments other than those in note 2; is that correct?

8 A. Yes, that is correct.

9 Q. Can you point me to anywhere in your
10 testimony where you explain which work items you
11 adjusted and by how much and why you did those
12 adjustments? And we can take that one at a time if you
13 want.

14 A. No, I don't explain all of -- all of the
15 adjustments item for item, but I do refer to
16 Ms. Million's testimony to arrive at the methodology to
17 use to extract that information. For instance, on her
18 testimony on page, her rebuttal testimony, on page 12,
19 lines 6 through 14, Ms. Million indicates that the times
20 reflect Qwest nonrecurring cost study assumptions. One
21 of the assumptions is that the order is a perfect order
22 and with the exception of fallout flow through
23 percentages for certain activities and do not include
24 problems encountered during the work activities. And
25 she further says that this means that the times

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1 documented do not reflect times expected to be spent
2 when an order is supplemented or changed, redesigned,
3 nor do they reflect problems or trouble at test with
4 systems or with customer, system bound times or times
5 spent resolving internal order flow problems. They are
6 also not -- they also do not include -- they do not
7 include those time estimates. And finally, she says the
8 time estimates do not include any maintenance or repair
9 time.

10 If you look at the cost study under the
11 context of what she said there and then recognizes --
12 recognizing that in Ms. Albersheim's testimony she
13 referred to the changes that I recommend as a direction
14 that Qwest is choosing to go in, she says that in page
15 7, lines 10 and 11 of rebuttal, she says that Qwest will
16 continue to improve its OSS processes including flow
17 through processes like those described by Mr. Morrison.

18 Taking those things in context, if you're not
19 charging us, charging the CLECs, for the problems
20 induced by incorrect service orders, because now you're
21 saying that you have received a perfect service order,
22 then you're saying that you recognize that the direction
23 you want to go in is toward the forward looking network,
24 most efficient OSS, then when I look at the cost study
25 and I see terms like review, validate, check, analyze, I

4926

1 ask myself the question, why are we looking for troubles
2 if we just said there should not be any there, and why
3 are we charging anyone to look for those particular
4 troubles.

5 I see those times that have been put in there
6 possibly for these types of tasks as maybe an attempt to
7 recover the costs that are induced within the process by
8 Qwest, because if you have a perfect order at the
9 beginning of the process, then on flow through the only
10 problems that can be induced at that point are those
11 caused by test -- Qwest technicians or business
12 processes. So that's the reason I factored out all of
13 those types of issues.

14 Then to the column F issue --

15 Q. And that's what I was asking you about,
16 Mr. Morrison, thank you, because I understood column E,
17 and so I'm really interested in what you did for column
18 F.

19 A. Okay. In column F, if you go to -- I have to
20 remember here a couple of exhibits.

21 Q. And I'm interested in a general explanation
22 right now, Mr. Morrison, because I am going to ask you
23 specifically about some adjustments that you made in
24 column F to some particular work items in just a minute.

25 A. Okay. What I found when I started analyzing

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1 it, and upon discovery --

2 Q. It would be helpful to me if you pointed to
3 me where you explained this in your testimony, because
4 that's really my question, where can we tell in your
5 testimony what you did to support the adjustments in
6 column F?

7 A. I explain in my testimony all through it that
8 we are looking at obviously the forward looking network
9 and the most efficient OSS, but I also imply that there
10 are problems with the times submitted by the subject
11 matter experts. And the further I analyse those, the
12 more -- the more confusing it became. Because I ran
13 across work items that I have reduced the times in
14 column F that were not explanatory, there was not a
15 detailed information to tell you, to tell me what we
16 were really doing in the process and what the times
17 really meant.

18 Upon further analysis, what I found out is
19 that a particular statement for a work item actually had
20 background activity going on that was not indicated. We
21 would have an activity with X number of minutes, yet we
22 would have behind it A, and the only way I found this
23 was on discovery I found a number of other tasks, four
24 or five additional tasks that also included the same
25 terminology that I reduced in column E or eliminated in

1 column E.

2 JUDGE BERG: Mr. Morrison, I just need to say
3 that this may be a reflection of my own limitations, but
4 it's really more helpful to me where it's clear how a
5 response relates to a question, and maybe my limits go
6 to about three sentences, compound sentences with, you
7 know, some commas and a colon and maybe even a couple of
8 semicolons. But at some point, I lose the context, and
9 I think you just need to trust Ms. Anderl and trust your
10 own counsel that if the context doesn't have a fair
11 chance to come out that they will fill it in. I have no
12 doubts at all that in your mind it's all part of the
13 same issue, but it helps if it's in a more of a question
14 and answer format for me.

15 THE WITNESS: Okay, understood.

16 JUDGE BERG: All right, thank you, sir.

17 THE WITNESS: Thank you.

18 MS. ANDERL: And, Your Honor, actually I have
19 now some questions about page 8 of this spreadsheet,
20 column F, which I hope will help us develop some more
21 clarity around those adjustments in column F. However,
22 in order to ask those questions, I do have to ask
23 Mr. Morrison to get Ms. Million's nonrecurring cost
24 study, and I wonder if we could take a short break off
25 the record while he did that.

1 JUDGE BERG: Well, normally we would break at
2 about an hour and a half, and we're getting to that
3 point, would you want to take our regular morning break
4 at this point in time, or do you want to get through
5 this piece of your cross-examination first?

6 MS. ANDERL: I was just hoping for three
7 minutes for a health break, sorry, I drank too much
8 coffee this morning, and thought that we could get the
9 witness with his exhibit and then go right back to it,
10 and then I'm close to the end of my cross.

11 JUDGE BERG: There is no such thing as a
12 three minute health break, but if you're getting close
13 to the -- when you say close to the end of your cross,
14 what are we talking about just ball park?

15 MS. ANDERL: 15, 20 minutes. I don't mind
16 going -- I mean I'll push through.

17 JUDGE BERG: Well, I tell you what, let's go
18 ahead and just take about a 3 plus 10 minute break, and
19 so, you know, counsel should be settling back in right
20 at 10:30, and several minutes after that we'll start. I
21 recognize it always takes several minutes for us to
22 actually get going again.

23 MS. ANDERL: Okay. In order to start
24 efficiently, I'm going to be looking at page 59 of 513
25 in the nonrecurring cost study.

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1 JUDGE BERG: And that is exhibit number?

2 MS. ANDERL: My exhibit list, Your Honor,
3 it's TKM-29.

4 JUDGE BERG: Okay.

5 MS. ANDERL: Yeah, it's the one that takes up
6 a whole binder.

7 JUDGE BERG: Sure.

8 MS. NELSON: I don't have that one with me.

9 MS. ANDERL: It's 2023.

10 JUDGE BERG: Yes, it is 2023.

11 We'll be off the record.

12 (Recess taken.)

13 BY MS. ANDERL:

14 Q. Mr. Morrison, on the break, you should have
15 -- well, I gave you a copy of Ms. Million's nonrecurring
16 cost study that's been admitted as an exhibit in this
17 proceeding. Do you have that document?

18 A. Yes, I do.

19 Q. And are you opened to page 359 of 513?

20 A. Yes.

21 Q. Was that the nonrecurring cost study that you
22 reviewed in the preparation of your Exhibit 2271?

23 A. I believe so.

24 Q. And on that page 359, we have the
25 nonrecurring cost analysis for UNE-P POTS first line

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1 mechanized new service install; is that right?

2 A. That's correct.

3 Q. And does that match up with the order
4 activity that you have set forth on your page 8 of your
5 spreadsheet Exhibit 2271?

6 A. Yes.

7 Q. Now for this type of order activity, Qwest
8 has not indicated that there are any work items
9 necessary to verify, validate, or check any information;
10 is that right?

11 A. If you look only at what's listed on this
12 page, you would be right.

13 Q. And you did not, as a result, you did not
14 make any adjustments for a verify, validate, or check
15 type work items in your column E; is that correct?

16 A. That's correct.

17 Q. Okay. The zeroes in that column, just so
18 we're clear, the zeroes mean that you didn't make any
19 adjustments?

20 A. That's right.

21 Q. Okay. And then in column F you made
22 adjustments, and the numbers in that column indicate how
23 much time you took away; is that right?

24 A. That would be right.

25 Q. Let's look at the line item entitled

4932

1 dispatch; do you see that?

2 A. Yes, I do.

3 Q. And do you see it also on page 359 of

4 Ms. Million's exhibit?

5 A. Yes.

6 Q. Column B of your spreadsheet indicates that
7 there are six Qwest work items, correct?

8 A. Yes.

9 Q. Okay. And if you count them on Ms. Million's
10 exhibit, there are, in fact, six line items, right?

11 A. Yes.

12 Q. Qwest's nonrecurring work time minutes for
13 dispatch totals 6.37 minutes, right, per order?

14 A. Yes.

15 Q. Okay. And is it your understanding that the
16 way that 6.37 minutes is calculated is by applying
17 probabilities of varying degrees to work times, some of
18 which are, well, which would total a longer amount than
19 6.37 minutes?

20 A. Yes, you're reducing that by the probability
21 of that event happening; that is correct.

22 Q. And so your understanding is that Qwest
23 assumes that these, all of these activities will happen,
24 but not on 100% of the orders 100% of the time?

25 A. That's correct.

4933

1 Q. Now you reduced that work time of 6.37
2 minutes by 3.19 minutes; is that approximately 50%?

3 A. Pretty close to 50%. My intention was across
4 these times to reduce those times by 50%. And the
5 reason for that is that as I looked at the work
6 activities on the cost study, I began to get the
7 impression that there had to be something behind some of
8 these descriptions, and so I did a discovery.

9 And take as an example under loop
10 provisioning center, average clearing time per RMA, on
11 discovery I found that there were in the neighborhood of
12 five or six additional items behind that.

13 MS. ANDERL: Your Honor, it pains me to
14 object again, but I will. Mr. Morrison is now
15 responding with information with regard to the loop
16 provisioning center, which is a work item completely
17 separate from the dispatch work items I was just asking
18 him about, and I do believe that this is something
19 that's more appropriate for redirect, very off track
20 from the items that I want to cover, and his information
21 that he is now providing is not related to my questions
22 about the dispatch work items.

23 JUDGE BERG: I think this goes again just a
24 little bit too far, Mr. Morrison. This is something
25 counsel -- she wanted some explanation, but she didn't

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1 want to hear everything about everything.

2 THE WITNESS: Well, I guess the kind of the
3 hazards of getting an engineer into a job, we have a
4 tendency to either sit here and not say hardly anything,
5 or we say almost everything we know, and I fall in the
6 latter category, I apologize.

7 JUDGE BERG: I understand, and I don't want
8 to inhibit you either from sharing with us the benefit
9 of your experience and your work here.

10 THE WITNESS: Okay, thank you.

11 BY MS. ANDERL:

12 Q. Mr. Morrison, under the dispatch work
13 function, did you separately analyze each and every one
14 of the six work items that are listed in Qwest's
15 nonrecurring cost study for dispatch?

16 A. As best I could with the information
17 available, I did.

18 Q. And did you make a separate judgment for each
19 of those work items whether it was appropriate to reduce
20 the work time or to reduce the probability or to reduce
21 both in some way to achieve a 50% reduction?

22 A. No, I largely went with a 50% reduction.

23 Q. So, for example, on the nonrecurring cost
24 study where it says dispatch service order for line work
25 res, that's kind of an expansion of what I think the

4935

1 abbreviation is, but --

2 A. Yes.

3 Q. It says that Qwest assumes five minutes, and
4 it assumes that that will happen about a third of the
5 time, or the probability listed there is .32; is that
6 right?

7 A. That's correct.

8 Q. And then it also lists a second probability,
9 which apparently provides a probability or a
10 relationship of residential to business orders; is that
11 right, the .1?

12 A. Yes, I see what you mean, yes.

13 Q. Okay. And so the effective or applied time
14 in minutes is reduced for purposes of the calculation of
15 the nonrecurring charge from 5 minutes down to .16
16 minutes; is that right?

17 A. That's true.

18 Q. And so based on your prior answer, is it
19 correct that you did not make an assessment of whether
20 the five minutes should be reduced to two and a half
21 minutes or the probability number one should be cut in
22 half or the probability number two should be cut in half
23 in each for purposes of reducing this work item by 50%?

24 A. That would be a correct characterization;
25 however, there are -- that's not really a -- my answer

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1 is really not complete with just that. There were
2 reasons that I took the approach of reducing this by 50%
3 that are just not apparent when you look at the cost
4 study as it appears in front of us.

5 Q. Okay. Is that -- and are those reasons set
6 forth anywhere in your testimony that you can point me
7 to?

8 A. No, they're not, other than some of the
9 discussion that I had about subject matter experts and
10 the characterization of the hazards of using subject
11 matter expert in this particular context. I believe
12 that there's a much more accurate method to come up with
13 times. There's also within that method there is, and
14 that method being really time and motion studies, within
15 that method, you have the ability to get ahold of all of
16 the nuances of the job and the tasks that are not
17 demonstrated in the very abbreviated description that we
18 have here.

19 And what I mean by those background tasks are
20 that a very brief description can include a considerable
21 number of other tasks that have just been summarized in
22 that particular form, and those are the things that I
23 began to discover. I suspected those initially, then
24 upon discovery I finally extracted the information that
25 I was looking for. And so then I knew that, for

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1 instance, behind the back of some of these, those that I
2 found on discovery, there were additional tasks.
3 Knowing that, now I made the assumption that there very
4 well could be additional tasks laying behind almost any
5 one of these, so in my mind's eye at that point, I go,
6 this most probably is off at least 50%.

7 Without the ability to do in depth analysis
8 in all those additional processes that lay behind a
9 single line description, it is very, very difficult to
10 get a handle on this cost study and come up with any
11 kind of truly accurate answers to the tasks that are
12 being performed, because the tasks that are being
13 performed are not totally described in the cost study.

14 Q. Thank you, Mr. Morrison, does that complete
15 your answer?

16 A. I think so.

17 Q. I would like to ask you some questions about
18 your rebuttal testimony where you talk about, or your
19 supplemental direct I guess is what it's called, and the
20 exhibit number is T-2272; do you have that?

21 A. Yes, I do.

22 Q. Now this is a short piece of testimony,
23 Mr. Morrison, and that's good, because it does not have
24 any page numbers on it.

25 A. Okay.

4938

1 Q. So turn to page third from the end.

2 JUDGE BERG: Ms. Anderl, just let me ask, is
3 that a confidential page?

4 MS. ANDERL: It is, and I think that it is
5 appropriately confidential, but I won't touch on that.

6 JUDGE BERG: Okay, thank you.

7 MS. ANDERL: In any way that impacts that.

8 BY MS. ANDERL:

9 Q. The first question and answer on that page
10 says, please describe the frames group and the
11 activities it conducts. Are we there?

12 A. Yes.

13 Q. Okay. Now the discussion that takes place on
14 that page and onto the next page is, and let me see if I
15 can summarize this correctly, it's your criticism of the
16 time estimate that Qwest has provided for the time it
17 takes to run jumpers on a frame?

18 A. Yes.

19 Q. Okay. And, in fact, actually on the second
20 confidential page, second from the end, you indicate an
21 amount of time that you estimate is appropriate to run a
22 jumper, which is one minute; is that right?

23 A. That's correct.

24 Q. Is that one jumper or more than one jumper?

25 A. In this case it's one jumper.

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1 Q. One jumper, one minute?

2 A. Mm-hm.

3 MS. ANDERL: Your Honor, just so you know, we
4 do not consider our four minute estimate to be
5 confidential.

6 JUDGE BERG: Thank you.

7 MS. ANDERL: And I think that that makes that
8 whole page not confidential. It certainly makes it
9 easier to talk about.

10 JUDGE BERG: It does, thank you.

11 BY MS. ANDERL:

12 Q. Mr. Morrison, you have run jumpers; is that
13 right?

14 A. Yes, I have.

15 Q. Okay. And let me ask you some questions
16 about what you have included in your estimate of one
17 minute.

18 A. All right.

19 Q. Does your one minute estimate include the
20 time it takes to get the order out of the order
21 provisioning system?

22 A. Yes, it does.

23 Q. And does it include the time it takes to read
24 the order?

25 A. Yes.

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1 Q. Does it include the time it takes to then
2 have the technician go to the main frame?

3 A. Yes, it does.

4 Q. Does it include the time it takes to have the
5 technician go to the wire reel and take the wire and
6 walk to the appropriate frame location?

7 A. Yes, it does.

8 Q. Does it include the time it takes for the
9 technician to locate the cross connect point for one end
10 of the jumper?

11 A. It does.

12 Q. And does it include the time it takes the
13 technician to attach the wire at one end of the cross
14 connect?

15 A. Yes.

16 Q. Does it include the time it takes for the
17 technician to locate the second location for the cross
18 connect?

19 A. Yes.

20 Q. Does it include the time that it takes to run
21 the wire through the wire trays to that second location?

22 A. Yes, it does.

23 Q. Does it include the time it takes to cut the
24 wire and attach it to the second cross connect point?

25 A. Yes, my estimate does include all of those.

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1 Q. And does it include the time it takes to reel
2 up any leftover wire from the wire reel after the cross
3 connect is complete?

4 A. Yes.

5 Q. And does it include the time it takes for the
6 technician to go back to the provisioning system and
7 complete the order?

8 A. Yes.

9 Q. And it's your testimony that a technician can
10 do all of that in one minute?

11 A. Yes, it is. In about 19 --

12 Q. Every time, Mr. Morrison?

13 A. On the average.

14 In about 1970, late '70's, I ran a series of
15 time and motion studies for --

16 THE WITNESS: I'm sorry, sir.

17 JUDGE BERG: Mr. Morrison, I'm just going to
18 stop you right there, because this is a good example of
19 the type of response where it's more proper for your
20 attorney to ask you a question rather than including
21 that kind of a justification for your response.

22 BY MS. ANDERL:

23 Q. Mr. Morrison, you say on average, so that
24 would mean in my understanding of the word average that
25 some of the times it will take longer than a minute, and

4942

1 some of the times it will take shorter than a minute; is
2 that right?

3 A. That would be right.

4 Q. How much faster than one minute do you think
5 a technician could do all of this activity in?

6 A. Again, we're dealing with averages, but I,
7 never having been the technician that did this on a
8 really productive basis time and time again, have done
9 it in considerably under a minute, probably closer to
10 the 20, 30 second range. When you use some productivity
11 methods to run a large numbers of jumpers, which
12 technicians typically do when they're wiring these types
13 of services.

14 Q. What types of services?

15 A. Typically UNE type, anything that requires in
16 this case a cross connect, this type of cross connect.
17 And I have also observed technicians running it in short
18 time, shorter times. I have also observed them running
19 them in longer times. But as a result of some things
20 that I have done, I have come up with the average of one
21 minute.

22 Q. And if for some reason a technician were
23 required to do these on an individual basis as opposed
24 to a bulk basis, would you agree that doing it, running
25 a jumper on an individual jumper by jumper basis as

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1 opposed to being able to consolidate them to do them on
2 a bulk basis, it would take longer per jumper to do it
3 on an individual basis than it would per jumper if you
4 were able to do them on a bulk basis?

5 A. Those would be the cases that would fall on
6 the high end of the bell curve when you take a look at
7 the average, yes.

8 MS. ANDERL: Your Honor, that completes my
9 cross-examination for this witness, thank you.

10 JUDGE BERG: Thank you, Ms. Anderl.

11 Ms. Tennyson.

12 MS. TENNYSON: Thank you.

13

14 C R O S S - E X A M I N A T I O N

15 BY MS. TENNYSON:

16 Q. Mr. Morrison, I'm going to be referring to
17 the same piece of testimony that Ms. Anderl has just
18 finished questioning you on, and I am looking at the
19 page before the confidential page, the question that
20 starts out, what is your recommendation relative to the
21 work items related to UNE design cost. Do you see that
22 question?

23 A. Yes, I do.

24 Q. And there you recommend that Qwest implement
25 a plan to continually upgrade system interfaces and

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1 business processes. Now did you read Ms. Albersheim's
2 testimony relating basically to this issue?

3 A. Yes, I did.

4 Q. And she stated that Qwest continues to
5 upgrade their internal systems and purchase vendor
6 upgrades for those systems that they purchase from
7 outside vendors. Does this statement by Ms. Albersheim,
8 does this satisfy your concerns or change your
9 recommendation?

10 A. It doesn't change my recommendation, because
11 Ms. Albersheim, to the best of my determination, is
12 looking at the OSS's within Qwest as a stand alone
13 system. We have, for instance, the TIRK system that
14 sits over here and then the Cosmo or switched system
15 that sits over here, we have the element management
16 systems that are sitting in maybe in a different
17 location or whatever.

18 But the real point is that they're managed
19 individually. And as far as whether they are forward
20 looking, up to date, the best technology, individual
21 case basis, that's true. When you start looking at
22 whether all of these systems are coming together in some
23 integrated form that is driven by the business processes
24 that Qwest has in place, then you find that there is not
25 a real concern yet evident to producing the forward

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1 looking efficient OSS that uses the business process as
2 a driver algorithms for the system, then in turn
3 integrates interfaces into those individual systems, and
4 then you begin to have the integration that
5 appropriately transfers information in the business
6 process task from system to system and eliminating the
7 manual intervention that is so cost intensive that we
8 see today.

9 Q. Thank you. Going on to the bottom of that
10 page, you reference, you state that Qwest has responded
11 it does not do time and motion studies. Are there ways
12 other than time and motion studies in your opinion to
13 validate the accuracy of work times?

14 A. Over a career of 35 years, I have seen a
15 number of methods that are attempted to be used to
16 validate times, and since I took on the job that I
17 currently have, I have seen some other unique techniques
18 to say the least. So far I haven't seen anything that
19 approaches the true time and study when it comes to a
20 degree of accuracy and a real degree of understanding as
21 to what is really being measured. So in my -- from my
22 perspective, time and motion studies are the most
23 probable way to go with this. They would be my first
24 choice by far.

25 Q. Okay. Now early in your testimony, you state

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1 that relying on the opinion of a single subject matter
2 expert as Qwest, as you state Qwest has done in some
3 places, is a problem when we're determining the time to
4 complete a task when we use that task to determine the
5 cost. Then later on in your testimony you actually give
6 some recommendations, or in your exhibits you recommend
7 reduced time for a number of specific tasks. Are those
8 recommendations that you make based on WorldCom internal
9 procedure studies or engineering standards?

10 A. I want to make sure I understand your
11 question. Are you comparing the subject matter experts'
12 estimations with the estimations that I'm making?

13 Q. Yes. I guess basically my question is, how
14 can your recommendations be substantiated as more
15 accurate than those of Qwest's subject matter expert
16 estimates?

17 A. Thank you. The Qwest subject matter expert
18 is in a what I will characterize as a unique set of
19 circumstances that put the -- any estimates that they --
20 that the individual produces as suspect. The reason I
21 say that is especially in today's world, and this has
22 been true really to some extent all through my career,
23 where, as a matter of fact these things happened to me
24 when I worked for the old U S West company, where the
25 regulatory or public policy or whoever comes to them and

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1 requests that they make estimates for cost studies.

2 And this subject matter expert is in a
3 position of knowing in this case that these services are
4 for the competitors, and the competitor represents a
5 threat to him, and he -- he suddenly becomes concerned
6 about them taking his job away or taking customers away
7 from the company. Then he has to -- he has to consider
8 things like the jobs, his job, the jobs of his people,
9 so he can't do anything to minimize his individual
10 importance or the need for his people or the fact that
11 he submitted a budget for X number of people over some
12 given period of time. So back in the mind -- back of
13 his mind, he's trying to rationalize all of that plus
14 meet the needs that were just handed to him. Now I say
15 that adds a bias to his ability to make that estimate.
16 Now that -- that's where he sits.

17 Where I sit is, and you could make the
18 analogy I'm a subject matter expert to some extent, no,
19 I am, however, I don't have those pressures. I don't
20 even allow my customers, in the case of WorldCom in this
21 case, to come to me and say, we just have to reduce
22 these costs. They want me to analyze the cost study, I
23 will analyze the cost study and tell them what the
24 results are. I try to maintain as objective of a view
25 of it as I possibly can based on my set of experiences,

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1 and that's where I see the differences between my
2 estimates and the, as a subject matter expert, and the
3 estimates of the internal subject matter expert within
4 in this case Qwest.

5 But also within Qwest, they have a large pool
6 of what you could call subject matter experts, and to
7 take the opinions of a singular subject matter experts
8 with all of these available experts there seems like
9 maybe a disservice to their own needs. Why not
10 integrate the opinions of those additional subject
11 matter experts as opposed to a singular. They even have
12 the actual people that sit there and do the jobs as
13 well.

14 But better than that, if you are a subject
15 matter expert and even if you are a manager, these jobs
16 real telling tool is when you sit down and you watch
17 what has to be done and you put a clock on it on a very
18 well defined task and you time those tasks. And at the
19 end of the task, you have a true understanding of what
20 was done and how long it took to do it.

21 Q. And if you were to perform essentially -- my
22 understanding is that would be some form of a time and
23 motion study that you just described in the last
24 sentence of your answer; would that be correct?

25 A. That would be right.

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1 Q. And would you then observe a number of
2 individuals performing the task and average those times?

3 A. That's a simplified description of a time and
4 motion study, yes.

5 Q. Okay. And from the cost studies that you
6 reviewed, how do you know that Qwest relied on only one,
7 the opinion of one subject matter expert?

8 A. There was an exhibit that Ms. Million
9 presented, I don't have it in front of me, but it lists
10 the subject matter experts. And when I went through it,
11 I found that for individual tasks that fall under, for
12 instance, a dispatch or a central office or a loop
13 provisioning center, that in a large majority of those
14 cases it was a singular subject matter expert that
15 presented the information.

16 Q. Okay. I would like you to refer to what's
17 been marked as staff cross-examination exhibits for you
18 as Exhibit 2304 and, or I'm sorry, 2305 and 2306.

19 A. I don't have that.

20 MS. NELSON: You don't have that?

21 THE WITNESS: Hm-mm, I go through 2304.

22 JUDGE BERG: We will be off the record
23 momentarily.

24 (Discussion off the record.)

25 BY MS. TENNYSON:

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1 Q. Mr. Morrison, do you have now before you
2 WorldCom's response to WUTC Staff Data Request Number 16
3 and a supplemental response to that?

4 A. Yes, I do.

5 Q. And is this a response that you prepared to
6 this question?

7 A. Yes, it is.

8 Q. Okay. And referring to WUTC Staff Data
9 Request Number 17 and the supplemental response to that,
10 was this a response that you prepared?

11 A. Yes, it is.

12 MS. TENNYSON: I would move the admission of
13 Exhibits 2305 and 2306.

14 MS. NELSON: No objection.

15 JUDGE BERG: They're admitted.

16 MS. TENNYSON: I have no further questions of
17 this witness.

18 JUDGE BERG: All right. One moment.

19

20 E X A M I N A T I O N

21 BY JUDGE BERG:

22 Q. I have one question and maybe a question or
23 two of follow up, and I will confess that this is a
24 question that was raised by Dr. Gabel before he left.
25 And I would like to direct your attention, sir, to your

4951

1 supplemental direct testimony Exhibit T-2272. I think
2 this may be the right spot.

3 A. Which exhibit is it? It's not attached to
4 this copy of it.

5 MS. NELSON: It's the exhibit, the testimony
6 is the exhibit.

7 THE WITNESS: Oh, excuse me, okay.

8 JUDGE BERG: And the copy that I'm looking at
9 actually shows some pagination at the top, let me -- so
10 I'm thinking it may be an earlier version, particularly
11 because it's Dr. Gabel's copy, and let me coordinate
12 this with --

13 MS. TENNYSON: I believe the non-proprietary
14 version has page numbers. The proprietary version
15 doesn't.

16 JUDGE BERG: All right.

17 BY JUDGE BERG:

18 Q. This, sir, refers to the question, why do you
19 believe Qwest's central office frames group costs are
20 overstated, and it would appear on the first
21 confidential page, the first yellow page of the two
22 yellow pages of that testimony, and this question is
23 about non-confidential information that is right at the
24 very bottom of the page where you say that, considering
25 the fact that Qwest is using modular and COSMIC

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1 technology in the NRC cost study, the jumper running
2 times are excessive. Do you see that, Mr. Morrison?

3 A. Yes, I do.

4 Q. All right. And the question goes to your --
5 the basis for the statement that Qwest is using modular
6 COSMIC technology, and the first part of the question
7 is, where does that understanding come from, and
8 secondly, whether your responses, your estimates, assume
9 that COSMIC technology is deployed in all offices or,
10 for example, some other subset offices with over 10,000
11 lines. So we'll take it in two parts.

12 A. Okay.

13 Q. Number one is, is it your understanding that
14 the COSMIC technology is deployed in all Qwest central
15 offices?

16 A. No, it is not deployed in all Qwest central
17 offices. However, up until very recently, it did meet
18 the definition of a forward looking technology.

19 Q. All right. And do your estimates, are they
20 based on an assumption that it would be -- that the
21 COSMIC technology would be deployed in all central
22 offices?

23 A. COSMIC technology is a product that is
24 distributed I think now by Aviya, it's been a Lucent
25 product and what Bellcore up -- Bellcore before that,

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1 and I'm not sure who -- not Bellcore but AT&T before
2 that and Western Electric before that. What COSMIC
3 represents is a single sided low profile modular
4 distributing frame, and it was one of the original
5 versions that sort of developed the generic name. The
6 reference probably would be more accurate to say single
7 sided low profile modular distributing frame.

8 That type of technology, its original design
9 intention when it came out in roughly about the mid
10 '70's, was that it accelerated the process of running
11 jumpers. It was closer to user friendly. The jumper
12 running process has been around since the inception of
13 the telecommunications industry, and it's always been
14 one of the most costly issues that they have had to
15 address. And over the history of telecommunications,
16 there has been a lot of attempts to improve that
17 methodology, and they have all up until very recently
18 still incorporate the fact that you have to --
19 technician has to run a jumper.

20 And the purpose of the improvement in
21 technology when modular frames came along was that we
22 can shorten the jumper, make it easier to terminate,
23 make all of the tasks relatively simple or simpler, make
24 it easier to find the locations. Those were all
25 objectives, and it's been hit or miss in a lot of cases

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1 over the history of the development of frames. And a
2 lot of the problems with them simply were application to
3 how they were used. But at any rate, the attempt was to
4 improve the efficiency.

5 So the COSMIC and consequently the modular
6 type frames became pretty much the standard when you
7 start talking about efficiency in running jumpers, when
8 you have to deal with that particular issue. So I would
9 say that that being the current standard of forward
10 looking technology that the times associated with
11 running jumpers and those types of frames are the times
12 that we should be considering for cost studies, because
13 they are the shorter, the more efficient times.

14 Q. So when you refer to modular COSMIC
15 technology in that part of your testimony, you're
16 referring to the product description of a one sided low
17 profile modular COSMIC frame; did I catch that properly?

18 A. That sounds right, yes.

19 Q. All right. And then it sounds like you're
20 also saying that the time estimates you have made are
21 not based upon an allocation of time based upon the
22 actual deployment of this COSMIC frame technology in
23 Qwest's central office, but is more based upon the
24 presence of that equipment in all central offices as a
25 form of forward looking most efficient technology?

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1 A. That would be correct. However, there's one
2 other issue that is unique to my experience that I throw
3 into the mix. There was a -- when we're talking about
4 the times to run the jumpers.

5 Q. That's right.

6 A. There was a time in my career with the old U
7 S West company that I ran a whole series of time and
8 motion studies on main distributing frames in all states
9 at that time, a 14 state region, and especially in the
10 what is currently Mountain Bell. And the purpose of
11 those time studies was to get a handle on the main frame
12 operations. But my experience was that, when I ran
13 those time studies, that conventional frames as an
14 example, the times for -- the average times would run
15 five, six minutes, seven minutes in a lot of cases, the
16 average, and I don't have all the documents, pretty old
17 documentation by now.

18 Q. That's pre COSMIC technology?

19 A. No, that was post COSMIC technology. And I
20 ran those all the way up through, oh, I guess around
21 divestiture when I had access to the other 14 states.
22 Anyway the results of my time studies when we deal with
23 COSMIC frames turned out to be that a technician only
24 averaged throughout the day running what they term as
25 the load for the day and then after that the sporadic

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1 orders that fall through for some consequential activity
2 right now. The average times turned out to be in the
3 right at one minute, one minute average, and those time
4 and motion studies were run under pretty well controlled
5 parameters.

6 Q. So if you were to look at, let's say that you
7 were to just deal with the actual deployment of
8 technology in the universe of Qwest's central offices as
9 you know it, that being that the COSMIC technology is
10 not available or deployed in all central offices, just
11 in general, if that were to be factored in, and I
12 understand that may mean in your mind we're disregarding
13 the point about forward looking or most efficient, but
14 if you were to just take that shot, that snapshot, and
15 look at the actual technology that's deployed as you
16 know it, in general, how would that affect your time
17 estimates?

18 A. Well, you're asking me to factor in the other
19 types of frames and average those in with the time of it
20 that I am representing for the COSMIC frame; is that a
21 fair representation of what your question was?

22 Q. If those other equipments are actually
23 fulfilling that function, then that would be the
24 question, and if that means that it's a question that
25 can't be answered based on your familiarity with the

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1 Qwest system, then that's acceptable.

2 A. I could not give you a specific number what
3 that average might be, but I could characterize it as
4 being larger than one minute. Because the other
5 technology, as I have indicated, is not the efficient
6 technology, the modular type frame would be. So if you
7 had to come up with a number that represents the
8 integration or an integrated number with all that
9 technology in it, then in my mind's eye, clearly it's
10 going to be larger than one minute.

11 JUDGE BERG: That's the only line of
12 questions I had.

13 And Ms. Singer-Nelson, the only thing I would
14 ask is that if it's possible to point the record to
15 places in Mr. Morrison's pre-filed testimony where he
16 provides a response to a question on redirect, then it
17 would not be necessary to actually have that testimony
18 repeated. So that, for example, if you were to do a
19 follow-up question on redirect to a cross-examination
20 question for the record, if the answer is already in
21 Mr. Morrison's pre-filed testimony and you know that, if
22 you can point the witness to that, confirm that the
23 testimony is responsive, and then go on to the next
24 question. I think that would be just as effective as
25 actually having the witness repeat what's already in the

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1 pre-filed testimony.

2 MS. NELSON: Sure, and to the extent that
3 it's not already in the pre-filed testimony, I would
4 like Mr. Morrison to finish an explanation of the
5 answer.

6 JUDGE BERG: Sure, that's fair game.

7 MS. NELSON: Thank you.

8

9 R E D I R E C T E X A M I N A T I O N

10 BY MS. NELSON:

11 Q. And I don't have that much for you,
12 Mr. Morrison, I just want to hit some key things. At
13 pages 12 and 13 of your direct testimony, actually
14 starting on page 11, Ms. Anderl went through the various
15 systems that are mentioned on that -- in that testimony
16 and asked whether you knew if those systems were in use
17 by Qwest and whether you considered them to be
18 efficient.

19 A. Yes.

20 Q. Why, if Qwest has those systems in place and
21 you do consider them to be efficient, why do you think
22 that Qwest cost studies are still overstating the costs?

23 A. I agree that the systems are efficient,
24 effective, and stand alone from a stand alone
25 perspective. The real issue is that that hasn't been

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1 carried forward in such a fashion that the latest
2 methodology in system interfaces and the latest
3 methodology in, or available, I should say available
4 technology, in work flow managers, work flow engines.
5 They're still within the industry, because this is
6 evolving technology, they still use the two terms almost
7 synonymously.

8 These types of systems and applications have
9 not been applied to the stand alone Qwest systems, and
10 until that happens, until that type of integration
11 happens, which finally takes the business process that
12 these systems support and integrates the business
13 process into the application to gain control, then you
14 haven't evolved to the truly effective, truly efficient,
15 what's potentially available, what is available today
16 technology.

17 Q. And where did you get your information on
18 what the latest technology is?

19 A. Well, when you're talking about work flow
20 engines, work flow managers, I implemented a scalable
21 Lucent product in Switzerland. It was designed for wire
22 line, wireless network as well as data networks. It's
23 kind of do it all, so to speak. We integrated it into a
24 very complex IT architecture very similar to what we're
25 talking about here with all these stand alone systems.

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1 And at that time, they were a state of the art systems
2 for ordering, provisioning, maintenance, and billing,
3 the total business process, but they were stand alone.

4 And we integrated this work flow manager into
5 the system using the business process that we developed
6 at diAx as the base line customer requirement document
7 for the development of the system. Which says if you
8 take a real description of your business process and now
9 you turn it into an algorithm, then it begins to perform
10 like the people that before were doing the job. Instead
11 of somebody reaching out to a keyboard and typing in a
12 command or a function or what have you, the system does
13 that for you. You can tell a technician or a manager or
14 an engineer, give him a set of instructions to do his
15 job, then you can turn that into an algorithm in the
16 system, which will do that part of the job for you. The
17 more and more of those tasks that you develop into an
18 algorithm, the more and more efficient you become.

19 And in Europe, the cost of technicians and
20 engineers is pretty high. It's on par with the U.S.,
21 probably a little above it, so we had to do something
22 just simply because we couldn't hire people. And that
23 was the solution that we came to. We integrated that
24 into our network and our network element managers, and
25 then we had or were approaching in services almost a

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1 hands off process.

2 This is one of those things that when you
3 implement it, you're always reaching out, going a little
4 bit further and a little bit further, because you learn
5 more and more about what you're doing and how to go
6 about doing it. And equipment and applications are
7 flexible enough that the more you learn how to do in a
8 manual fashion that is instruction driven, then you can
9 turn around and do that in the system. So we
10 incrementally replaced people as we integrated more and
11 more systems in. We didn't just suddenly walk in with
12 the system one day and tie it to every system we had and
13 then start running it, it was a progression process, and
14 it improves your efficiency as you drive down the road.

15 Q. And so did you use that experience as a basis
16 for some of your assumptions in reducing the time
17 estimates that Qwest had in its studies?

18 A. Yes, I did.

19 Q. Now you have -- there were a lot of questions
20 posed to you relating to what Qwest actually has
21 deployed in its network; do you recall those types of
22 questions? I think even the Judge asked you one of
23 those questions.

24 A. Yes.

25 Q. Do you understand the standard for cost

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1 studies to be what would actually be deployed in Qwest's
2 network or what should be deployed in a forward looking
3 efficient network?

4 MS. ANDERL: Objection, Your Honor, the
5 witness has testified that he has no experience or
6 expertise in applying TELRIC principles.

7 JUDGE BERG: Well, he is making certain
8 judgments in his testimony about forward looking
9 technology, and he has defined it, and I think it goes
10 fundamentally to understanding the basis for the
11 recommendations he makes. And so without regard to
12 whether his understanding is proper or not, I think it's
13 important to know what it is.

14 MS. NELSON: Thank you, judge.

15 A. I don't attempt to address the entire TELRIC
16 issue. I'm not a TELRIC expert myself, but I take the
17 statement within TELRIC that says we use the most
18 efficient forward looking technology and apply that to
19 my analysis. Witnesses like Mr. Gates would be a much
20 better witness to address the total TELRIC issue.

21 BY MS. NELSON:

22 Q. But when you were doing your evaluation of
23 the work tasks and the times that Qwest laid out in its
24 studies, did you consider -- did you think that the
25 standard that you were working with was what was

4963

1 actually deployed in Qwest's network, or was your
2 evaluation based on what the forward looking efficient
3 network would look like?

4 A. We should be looking at forward looking
5 efficient network, that's what I looked at.

6 Q. Remember the discussion about the one minute
7 recommendation that you made relative to central office
8 frame group cost; do you remember the discussion about
9 that?

10 A. You're talking about on the modular frame or
11 COSMIC frame, the one minute jumper running time?

12 Q. Yes.

13 A. Yes.

14 Q. Do you feel like you have accurately and
15 completely explained your reasoning for reducing the
16 time estimate in Qwest's studies to one minute? I know
17 that you were cut off at one point, and I know you had
18 an opportunity to explain it a little more later on, so
19 I don't want you to repeat your testimony, but I do want
20 to make sure that you were able to fully respond.

21 A. Yes, I feel like we probably covered the full
22 explanation, especially when Judge Berg asked questions,
23 his questions.

24 Q. Okay. And then with regard to the
25 observation by Ms. Anderl that your recommendations

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1 largely went to 50% reductions, do you feel like you
2 have been able to fully explain your reasoning for
3 reducing the time estimates in general by a 50% margin?

4 A. I probably covered the vast majority of the
5 explanation. There probably are a couple of things that
6 I could add to it that are really specific to a couple
7 of discovery questions. They are partially described in
8 my testimony. One of them is.

9 Q. Okay, well, why don't --

10 A. And --

11 Q. You don't have to repeat that one.

12 A. Okay. The other was I believe -- let me see
13 if I can find it.

14 JUDGE BERG: But let me do interject that if,
15 in fact, there is a specific reference point where this
16 witness wants to point us to the part in his testimony
17 that he's referring to, that would be helpful.

18 MS. NELSON: Okay.

19 BY MS. NELSON:

20 Q. Mr. Morrison, did you understand that, that
21 at this point you should point to the portion of your
22 testimony that responds to the question, and then go on
23 and explain the one that's not outlined.

24 A. In my supplemental testimony, Exhibit, what
25 is that, T-2272 I believe.

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1 Q. Yes.

2 A. Page unknown, what is it, five from the back
3 I believe it is, and it's a question that says, why are
4 Qwest UNE design center costs overstated, and I believe
5 that's the first part of one of the two examples.

6 The other example is in Qwest Exhibit Number
7 23, or excuse me, no, that's not correct, that's just
8 where I made my note. Discovery 02282.

9 Q. So that's been marked as Exhibit 2291, and
10 it's an attachment to your testimony?

11 A. Yes.

12 Q. And there's a confidential Attachment A to
13 that response?

14 A. Yes, that is the other explanation in that it
15 points out the background task that are behind the items
16 listed, work items listed in the cost study.

17 JUDGE BERG: And let me just confirm with
18 counsel, when we admitted the direct exhibits of
19 Mr. Morrison, did that include 2291 and C-2291?

20 MS. NELSON: Yes.

21 JUDGE BERG: All right, thank you.

22 THE WITNESS: Then we've got them all.

23 MS. NELSON: It's actually stapled
24 separately.

25 BY MS. NELSON:

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1 Q. So with those two examples, do you feel like
2 you have been able this morning to explain your
3 recommendation that the work tasks should be reduced on
4 average by 50%?

5 A. At least 50%, yes.

6 Q. Okay. Now remember when Ms. Anderl was going
7 through the UNE-P POTS first line mechanized new service
8 install cost study with you, that was in Exhibit TKM-29,
9 and I don't know what the new number is, but do you
10 recall that discussion with Ms. Anderl?

11 A. Are you talking about page 359 of whatever it
12 is?

13 MS. TENNYSON: 2023.

14 Q. Do you recall that discussion?

15 A. Yes.

16 Q. She went through the fact that there was a
17 probability factor in the Qwest cost study; do you
18 recall that?

19 A. Yes.

20 Q. Why did you still reduce the times despite
21 the fact that a probability factor existed in the
22 studies?

23 A. Well, the probability factor is a reduction
24 of the time in minutes for that particular set of
25 circumstances, and seeing that the time in minutes

4967

1 itself is inflated, then using that operator on that
2 time in minutes, you're still going to have a larger
3 number than you should have as a result. So the point
4 is to get to the accurate time in minutes per work item
5 task.

6 Q. Thank you. Now remember when Ms. Tennyson
7 was talking to you about time and motion studies?

8 A. Yes.

9 Q. Now don't time and motion studies, if you
10 were to do a time and motion study, it sounded to me
11 like what you would be recording would be actual work
12 times?

13 A. That is the purpose of time and motion
14 studies.

15 Q. Well, then how would you account for the
16 forward looking most efficient aspect of your analysis?

17 A. In the time and motion study process, you
18 would be timing tasks that a technician or whoever is
19 performing, and you're looking at the component parts of
20 those tasks, and you're getting a good idea, you're
21 getting an accurate idea of what all is involved in the
22 process that's taking place, start, stop, now we have
23 this time interval. Now you look at the process and you
24 say, what task within these business processes can fall
25 to systems as opposed to being manual, and then you

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1 begin to factor those times out.

2 Because you say, let's say you have a
3 technician that is -- has taken a piece of paper and
4 sits at the terminal and typing in the data that's
5 recorded on the paper. Well, you say, an interface can
6 do that job. If this came from one system and now it
7 needs to go to another system, then the interface could
8 take care of that particular piece of information. Or
9 if the piece of paper requires information from
10 peripheral systems or additional OSS like in this case,
11 and it resides in one OSS over here, then an interface
12 to the system or access by way of interfaces to that
13 system driven by the business process can go out and do
14 that for the technician as opposed to having to say,
15 oops, I got this out of this system, this line is blank,
16 I need to populate this field, then going over here and
17 looking it up, and then populating the field and maybe
18 even having to add this information to this system.
19 That's an example.

20 Now we know that that can be done with an
21 interface, so we produce an interface, give it the
22 instructions, the instruction set this is very similar,
23 probably exactly the instruction set that the technician
24 had all the way down to his methods and procedures, turn
25 that into an algorithm, now the system is in that case

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1 doing what the technician was doing. So you factor that
2 time out of the process.

3 MS. NELSON: I have no further questions.

4 JUDGE BERG: All right.

5 MS. TENNYSON: I did have one follow-up,
6 Mr. Morrison.

7 JUDGE BERG: Oh, excuse me, I'm sorry,
8 normally we would go at this point I think we would go
9 after redirect back to Ms. Anderl, and then conclude
10 with staff, and you would have the benefit of the
11 additional questions that staff might ask, but this
12 might be a good time just to take a moment, pause, and
13 let's be off the record.

14 (Discussion off the record.)

15

16 R E C R O S S - E X A M I N A T I O N

17 BY MS. ANDERL:

18 Q. Just a couple of areas, Mr. Morrison.

19 Following up again on the experience that you described
20 when you were with diAx.

21 A. DiAx, yes.

22 Q. How many customers did diAx have, if you
23 know, at the time that you left your employ for that
24 company?

25 MS. NELSON: I don't think I said anything in

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1 redirect about this.

2 MS. ANDERL: Your Honor, he answered about it
3 in redirect.

4 JUDGE BERG: I recall information about the
5 organization, and I will allow the question to be asked.

6 A. Taxing my memory here.

7 BY MS. ANDERL:

8 Q. How long ago was it, by the way, that you
9 left your employ there?

10 A. I left December of 2000.

11 Q. Right after the Sunrise acquisition?

12 A. Yes. At that point, it was kind of a mix of
13 Sunrise customers and diAx customers. The customers
14 that resided on the diAx network, total customer
15 account, subject to a lot of check, 300,000 or 400,000.

16 Q. Now you're not employed directly by WorldCom,
17 are you, Mr. Morrison?

18 A. No, I'm not.

19 Q. And you're employed by QSI?

20 A. Correct.

21 Q. Is that a consulting firm?

22 A. It is.

23 Q. And are you being paid for your appearance
24 here today?

25 A. Yes, I am.

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1 Q. And you have been retained by WorldCom in
2 other proceedings; is that right?

3 A. Yes.

4 Q. Okay. In any of those proceedings where you
5 examined ILEC nonrecurring cost studies, have you ever
6 recommended increases to ILEC time estimates or
7 nonrecurring costs?

8 A. No, I haven't. I would characterize their
9 cost study as being pretty well represented by a Qwest
10 cost study.

11 MS. ANDERL: Thank you, that's all I had,
12 Your Honor.

13 JUDGE BERG: Thank you, Ms. Anderl.

14 Ms. Tennyson.

15 MS. TENNYSON: Nothing.

16 JUDGE BERG: All right.

17 Anything further, Ms. Singer Nelson?

18

19 R E D I R E C T E X A M I N A T I O N

20 BY MS. NELSON:

21 Q. Mr. Morrison, do you hold Qwest stock?

22 A. Yes, I do, unfortunately.

23 MS. NELSON: I have nothing further.

24 JUDGE BERG: All right.

25 Anything further, Ms. Anderl?

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1 MS. ANDERL: No.

2 JUDGE BERG: All right, then.

3 Mr. Morrison, thank you very much for being
4 here and for your attendance throughout the hearing. We
5 sincerely appreciate the information that you have
6 shared with us, and at this time you're excused from the
7 witness stand and from this proceeding.

8 THE WITNESS: Thank you, sir.

9 JUDGE BERG: All right, we will be off the
10 record.

11 (Luncheon recess taken at 12:00 p.m.)

12

13 A F T E R N O O N S E S S I O N

14 (12:35 p.m.)

15

16 (The following exhibits were identified in
17 conjunction with the testimony of MICHAEL LEHMKUHL.)

18 Exhibit T-2320 is Direct Testimony of Michael
19 Lehmkuhl. Exhibit 2321 is WorldCom Response to Qwest
20 Data Request No. 44. Exhibit 2322 is WorldCom Response
21 to Staff Data Request No. 28.

22

23 Whereupon,

24 MICHAEL LEHMKUHL,

25 having been first duly sworn, was called as a witness

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1 herein and was examined and testified as follows:

2 DIRECT EXAMINATION

3 BY MS. NELSON:

4 Q. Mr. Lehmkuhl, please state your name and
5 business address for the record and spell your last
6 name, please.

7 A. Michael Lehmkuhl, L-E-H-M-K-U-H-L, business
8 address is 601 South 12th Street, Arlington, Virginia
9 22202.

10 Q. Are you an employee of WorldCom?

11 A. Yes, I am.

12 Q. And what is your position?

13 A. Senior regulatory specialist for directory
14 assistance and operator services.

15 Q. Did you prepare testimony, direct testimony
16 of Michael Lehmkuhl that's been marked as T-2320?

17 A. Yes, I did.

18 Q. Do you have any changes?

19 A. Yes, I do.

20 On page 9, line 9, the number 345 should be
21 changed to 3.42. And then after the word less, insert
22 the words, or 100% more.

23 And that's the extent of my changes.

24 Q. Otherwise is the testimony true and correct
25 to the best of your knowledge?

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1 A. Yes, it is.

2 MS. NELSON: I move for the admission of
3 T-2320.

4 MR. SHERR: No objection.

5 JUDGE BERG: All right, T-2320 is admitted,
6 and we will also designate an exhibit number for E-2320
7 and request that WorldCom within ten days submit an
8 errata sheet containing the change that the witness has
9 referred to.

10 MS. NELSON: Will do, Judge.

11 JUDGE BERG: All right, and E-2320 is also
12 admitted.

13 MS. NELSON: Thank you. Mr. Lehmkuhl is
14 available for cross.

15 JUDGE BERG: All right.

16 Mr. Sherr.

17

18 C R O S S E X A M I N A T I O N

19 BY MR. SHERR:

20 Q. Good afternoon, Mr. Lehmkuhl.

21 A. Good afternoon.

22 Q. My name is Adam Sherr, I'm an attorney for
23 Qwest, I'm the silent partner of the group.

24 MR. SHERR: Before I forget, I would like to
25 move for the admission of Qwest's own cross exhibit,

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1 which was marked as 2321, a WorldCom response to Qwest
2 Data Request Number 44. I understand Ms. Singer-Nelson
3 has no opposition to that.

4 JUDGE BERG: Thank you very much, Exhibit
5 2321 is admitted.

6 MR. SHERR: Thank you.

7 BY MR. SHERR:

8 Q. Mr. Lehmkuhl, could you please locate your
9 testimony, which has been marked as Exhibit T-2320 and
10 specifically at page two.

11 A. Yes.

12 Q. On that page, you identify your education and
13 work experience; is that correct?

14 A. Yes.

15 Q. And you are an attorney by training?

16 A. Yes, I am.

17 Q. I see you're also educated in mass
18 communications and journalism?

19 A. Yes, that's true.

20 Q. Tell me what mass communications is.

21 A. Well, what it used to mean was the social
22 study of the effective media and reporting and
23 communications in the world. I don't know what it means
24 today. It's been a while since I studied mass
25 communications.

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1 Q. So it's not telecommunications per se?

2 A. Not specifically, but it may include
3 telecommunications, yes.

4 Q. When you received your education in mass
5 communications, did it include any technical
6 telecommunications education?

7 A. A little bit.

8 Q. Can you tell me what that was?

9 A. I can't really say specifically. It
10 certainly didn't have anything to do with engineering or
11 anything of that sort, although I will say that as a
12 practicing attorney practicing communications law, I
13 have had the opportunity to be exposed to engineering of
14 all sorts with regard to telecommunications.

15 Q. Have you ever held the position of a network
16 technician or engineer for a telecommunications company?

17 A. No.

18 Q. Have you ever held a position with an IT
19 department for a telecommunications company?

20 A. No, I have not.

21 Q. Just for clarity, I mean information
22 technologies.

23 A. Yes, I understood that.

24 Q. Have you received any formal education in
25 computer science or IT?

4977

1 A. I took a few classes in IT in college.

2 Q. And when did you graduate college?

3 A. 1987, I believe.

4 Q. Are you testifying today as a policy witness
5 for WorldCom?

6 A. Yes, as policy, and certainly to some of the
7 facts as I have included in my testimony.

8 Q. Thank you. If you would just quickly look,
9 flip through pages 3 through 11 of your testimony, my
10 question for that is, are you, in those pages, are you
11 discussing the directory assistance listing information?

12 A. Yes, I am.

13 Q. I have a definitional question for you, and
14 you might have heard Ms. Anderl ask this question of Mr.
15 Caputo yesterday, I believe you were in the hearing
16 room, throughout your testimony you use the words cost
17 based pricing or pricing at cost; does that mean TELRIC?

18 A. I'm not exactly sure what that means, and by
19 that statement I mean that I certainly know that TELRIC
20 has a very specific meaning, although there are some in
21 this industry that don't know what exactly TELRIC still
22 means, but I believe it -- I wouldn't necessarily say
23 they're synonymous, but they certainly have to be based,
24 as TELRIC is, certainly based on cost.

25 Q. What did you mean then by, and maybe we

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1 should look at specific examples since you have used the
2 term several places, if you would look at page 4 of your
3 testimony for me.

4 A. Yes.

5 Q. Line 13 and 14, there you use the term cost
6 based prices; did you mean TELRIC there?

7 A. No, if I would have meant specifically
8 TELRIC, I probably would have said TELRIC. I mean I
9 will say that, for example, in California, the -- in our
10 arbitration in California, the commission had agreed
11 with our position that directory assistance listings
12 should be provided on a cost based basis, and they have
13 set up a separate proceeding to determine what the cost
14 based pricing should be. I'm not specifically certain.
15 I know for a fact that they didn't specifically mean
16 TELRIC.

17 Q. Well, what did you mean by cost based here
18 then? I guess I'm confused.

19 A. What I mean by cost based here is what it
20 costs Qwest, I believe. Let me take a moment here and
21 read my testimony.

22 (Reading.)

23 What I mean by cost based here is simply that
24 the pricing should be based on Qwest's costs.

25 Q. On what basis?

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1 A. On the basis, as I have explained in my
2 testimony, that cost based pricing is consistent with
3 nondiscriminatory access.

4 Q. I didn't ask a very clear question, I'm
5 sorry, let me try again.

6 Costs calculated on what basis? You say that
7 the costs should be based on Qwest's prices; how would
8 you calculate --

9 A. On Qwest's costs.

10 Q. Excuse me, on Qwest's costs; how would you
11 calculate Qwest's costs?

12 A. Well, a cost study would be a start. I mean
13 I'm not a cost expert, so I don't know what, you know, I
14 can't give you any specific particulars, but I do know
15 that a number of states have based -- have based their
16 prices for directory assistance listings on the costs
17 that the ILEC incurs, both the costs to itself, well,
18 mainly costs that it incurs itself in developing a
19 directory assistance list data base.

20 Q. Do you mean in a forward looking sense?

21 A. Sure, if you will. I mean now that goes to
22 the TELRIC definition, and like I said, I'm not a -- I'm
23 not a cost expert, so I want to be very careful when I
24 talk about TELRIC, because I don't know everything about
25 TELRIC.

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1 Q. Sure, and I'm not trying to beat a dead
2 horse, I'm just trying to understand what you meant when
3 you put in your testimony cost based.

4 A. So?

5 Q. So the question is, when you, on page 4,
6 where you were discussing cost based prices for these
7 services, on what calculation or what type of
8 calculation were you considering that the Commission
9 should use?

10 A. The cost that Qwest incurs to itself to
11 produce these listings.

12 JUDGE BERG: I think my understanding of your
13 testimony, Mr. Lehmkuhl, is you did not have any
14 particular methodology in mind.

15 THE WITNESS: That's correct.

16 JUDGE BERG: Is that correct? Thank you.

17 MR. SHERR: Okay, I will move on, thank you,
18 Your Honor.

19 BY MR. SHERR:

20 Q. If I can have you look at page 6 and 7 of
21 your -- starting at page 6 of your testimony, beginning
22 at that question that starts at the bottom, you were
23 discussing whether DAL is subject to nondiscriminatory
24 access requirements under dialing parity; is that
25 correct?

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1 A. Yes.

2 Q. And by dialing parity, you're talking about
3 Section 251(b)(3) of the Telecommunications Act; is that
4 correct?

5 A. Yes, that's correct.

6 Q. And I understand your testimony to be that
7 WorldCom believes that under the dialing parity
8 requirements that DAL information must be cost based; is
9 that correct?

10 A. Yes, that's correct.

11 Q. On page 7, line 4, there's a question that
12 is, why are cost based rates for DAL appropriate; do you
13 see where I'm reading?

14 A. Yes.

15 Q. And your answer starts, because anything
16 higher is discriminatory; is that correct?

17 A. Yes, that's correct.

18 Q. Again here, does cost based equal TELRIC,
19 does it mean TELRIC?

20 A. As I testified before, I can't really answer
21 that question. I mean the point that I'm trying to get
22 across here is that if the price is any higher than what
23 Qwest pays, then Qwest is in effect discriminating
24 against anyone else in the marketplace for directory
25 assistance listing information. I mean you can -- Qwest

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1 can be nondiscriminatory as to everybody else in the
2 marketplace by charging them the same amount, but if
3 you're looking at the true meaning of non-discriminatory
4 access, that price also has to be the same as to what
5 Qwest charges itself.

6 Q. But the calculation of Qwest's costs, just to
7 make sure I understand your testimony, is not
8 susceptible to a precise definition in your mind; is
9 that correct?

10 A. Well, no. I mean it would, you know, we have
11 to determine I think what it costs Qwest to produce
12 this. So if that's TELRIC, then so be it. But I mean
13 it certainly is consistent with a lot of what the FCC
14 says, especially with regard to 251(c)(3) under the UNE
15 requirement, which is the -- our other argument. But I
16 don't think that the FCC has ever really defined TELRIC
17 to apply to this type of situation. But based on what I
18 understand nondiscriminatory access to mean, it
19 certainly needs to be cost based.

20 Q. For purposes of this question, please assume
21 that in an appropriate proceeding this Commission has
22 determined that the directory assistance listing data
23 base is a UNE; is that okay?

24 A. Okay.

25 Q. And you recognize that Qwest disagrees with

4983

1 that point?

2 A. Yes, yes, I recognize that.

3 Q. With that assumption in mind, can you tell me
4 what the TELRIC rate for directory assistance listing
5 information elements would be as you sit here today?

6 A. I can only use what costs have been disclosed
7 by Qwest before, and I believe I have included those in
8 my testimony. I have also included the cost, the TELRIC
9 costs that were used in Texas to determine that rate,
10 and I think Qwest has a pretty similar operation from
11 what I can tell. So those would be my guides, but as
12 far as, you know, specifically identifying what a TELRIC
13 rate would be, no. Like I said, I'm not a, you know,
14 I'm not trained as a cost person.

15 Q. But it's WorldCom's position that this
16 Commission should adopt TELRIC based rates for this --
17 for these elements; is that correct?

18 A. Yes.

19 Q. Did WorldCom perform a cost study to your
20 knowledge for purposes of this proceeding?

21 A. I don't think we're required to provide a
22 cost study. I mean how can -- how do we know what it
23 costs Qwest?

24 Q. Is that no?

25 A. Yes.

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1 Q. Yes, that's no?

2 A. Yes, that's a no.

3 JUDGE BERG: Let me just say, Mr. Lehmkuhl,
4 to keep everything well balanced here, WorldCom could
5 have produced a cost study of its own costs that it
6 thought was relevant, so it's important, particularly as
7 an attorney witness, not to get ahead of the questions.

8 THE WITNESS: No, that's true. With all due
9 respect, Qwest is -- the way they do it from what I have
10 seen is a lot different from the way we do it, and I
11 think that's one of the things I was trying to point
12 out.

13 JUDGE BERG: All right, thank you, sir.

14 (Discussion off the record.)

15 BY MR. SHERR:

16 Q. Has the FCC ever ordered that TELRIC pricing
17 is required for directory assistance listing data base
18 elements?

19 A. Yes, I believe they did on the -- in the
20 local competition first report and order when they
21 identified directory assistance listings as UNEs, and I
22 believe I have that in my testimony somewhere.

23 Q. Would you look at page 6 of your testimony,
24 lines 16 through 19 says:

25 Although it declined to adopt a specific

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1 pricing structure for DAL as between all
2 LECs under dialing parity, it encouraged
3 states to set their own rates consistent
4 with non-discriminatory access
5 requirements of 251(b)(3).

6 Did I read that accurately?

7 A. Yes, yes, you did.

8 Q. And the it here is the FCC?

9 A. Yes.

10 Q. If you could please look to page 10 of your
11 testimony.

12 A. (Complies.)

13 Q. Beginning at line 14, there's a question and
14 answer. The question is:

15 Is Qwest's proposed rate for a reload or
16 refresh appropriate?

17 Your answer:

18 No for the most part. The only time
19 WorldCom requests a reload of the data
20 base is when WorldCom receives corrupted
21 data from Qwest.

22 Did I read that correctly?

23 A. Yes, that's correct.

24 Q. To your knowledge, has WorldCom requested a
25 reload from Qwest in the last 12 months?

4986

1 A. As I believe I responded in the discovery
2 questions that we received, not in recent memory, not
3 within the past 36 months.

4 Q. So what is the basis for your testimony on
5 page 10, lines 14 through 16, that WorldCom has
6 requested reloads of the data base from Qwest because
7 Qwest has provided it corrupted data?

8 A. Could you ask that question again, please?

9 Q. Sure. What does the -- I believe you just
10 testified that, as you answered in discovery, WorldCom
11 has not requested a reload of the data base from Qwest
12 at any time within the last three years; is that
13 correct?

14 A. Yes, that's correct.

15 Q. So what's the basis for your statement at
16 page 10, lines 15 through 17, of your testimony that
17 WorldCom has requested a reload of the data base from
18 Qwest because Qwest provided it corrupted data?

19 A. Perhaps I wasn't clear in my testimony, and
20 the insertion of the word would before the word request
21 might help to clarify things. We regularly -- and as I
22 stated in my discovery, in the discovery requests, there
23 are a lot of other LECs or ILECs that we regularly have
24 to request a reload from. And, you know, I'm not --
25 while we haven't requested one from Qwest in the past 36

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1 months, that's not to say that we would not have to
2 tomorrow or, you know, sometime in the future.

3 Q. But to your knowledge, you have not had to
4 request such a reload from Qwest?

5 A. No, as I stated, in the past 36 months, no.

6 Q. Would you agree that a CLEC might request a
7 reload of the DAL data base for reasons not involving
8 fault or errors on the part of the ILEC?

9 A. Yes.

10 Q. Would a CLEC system crash be an example?

11 A. Perhaps.

12 Q. Would a CLEC desire to validate or verify the
13 contents of a data base be an example?

14 A. I'm not certain, no, I don't believe so.

15 Q. You don't believe that a CLEC might wish to
16 ask for a reload of the data base because they wished to
17 verify if the contents that they -- if the current
18 contents are accurate?

19 A. I think there are other ways of doing that.
20 If there is a question as to -- if, for example,
21 WorldCom has a question as to the integrity of their
22 data base, it would depend on what that would be, what
23 the problem would be, and if -- I think if they find
24 that it's a problem with the data base itself, they
25 might request a reload. But as far as the integrity of

4988

1 the data of Qwest, I don't think that they need to
2 request a refresh of the data for that type of purpose.
3 There are other ways of doing that.

4 Q. I think in part of your answer you said that
5 it's possible that the CLEC's data could become
6 corrupted for some reason not related to the ILEC; is
7 that true?

8 A. Certainly, it happens in any data base as far
9 as I know.

10 Q. So they may, they meaning a CLEC, may request
11 a refresh or a reload on that basis as well?

12 A. And I think that goes to my prior answer,
13 yes. Certainly we have an interest in keeping our data
14 base well run, and we have an interest in the integrity
15 of our data base, so it's certainly not something that
16 would ever be intentional or anything like that.

17 Q. Okay. Again going back to my assumption for
18 you, which is again assume that in an appropriate
19 proceeding that this Commission found that the DAL data
20 base and its elements are UNEs or are a UNE, and so do
21 you have that assumption in mind?

22 A. Yes.

23 Q. And I take it again in that circumstance, a
24 TELRIC pricing structure would be appropriate in
25 WorldCom's position --

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1 A. Well, I think --

2 Q. -- in WorldCom's thinking?

3 A. Well, I think that is consistent with what
4 the FCC has said with regard to UNEs, yes.

5 Q. So with that in mind, would you agree with me
6 that a request by a CLEC to reload the data base leads
7 to costs to Qwest?

8 A. Yes, as I stated in my testimony, there are
9 certain costs associated with someone having to go in
10 and prepare that file, and, you know, we're certainly
11 willing to pay those reasonable costs.

12 Q. Would you agree with me that the function of
13 providing a reload on the part of Qwest is identical to
14 the function of providing the initial load?

15 A. No, I would not, simply because the initial
16 load requires a lot more time for the personnel to
17 create how the data will be transmitted and certain
18 setup functions, whereas with a reload they have already
19 got that type of set up there, so it's a matter of
20 simply making a snapshot of the data base.

21 Q. Are you aware that Qwest's rate elements
22 include a separate one time setup fee, which is billed
23 on an hourly basis?

24 A. I will assume that subject to check.

25 MR. SHERR: Thank you, sir.

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1 JUDGE BERG: Ms. Tennyson.

2 MS. TENNYSON: Thank you, I would simply like
3 to move the admission of Exhibit 2322.

4 MS. NELSON: No objection.

5 MS. TENNYSON: Thank you.

6 I have no questions for this witness.

7 JUDGE BERG: All right, Exhibit 2322 is
8 admitted.

9 And I have no questions.

10 Redirect, Ms. Singer-Nelson?

11 MS. NELSON: No.

12 JUDGE BERG: All right.

13 Mr. Lehmkuhl, thank you very much for your
14 patience and for testifying before me in this
15 proceeding.

16 THE WITNESS: Thank you, Your Honor.

17 JUDGE BERG: All right, we will be off the
18 record momentarily.

19 (Recess taken.)

20 JUDGE BERG: At the outset, I will indicate
21 there's an additional cross exhibit, Qwest cross
22 exhibit, to be identified and marked by stipulation
23 between Qwest and Covad, and that would be an excerpt
24 from Qwest's response to Covad Data Request 04-060,
25 letter S1, this exhibit will be marked as Exhibit 2366,

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1 C-2366.

2 Welcome, Dr. Cabe.

3

4 (The following exhibits were identified in
5 conjunction with the testimony of RICHARD CABE.)

6 Exhibit T-2350 is Supplemental Response
7 Testimony, 2/14/02 (RC-T1). Exhibit 2351 is Resume of
8 Richard Cabe, dated February 14, 2002 (RC-1). Exhibit
9 2352 is Responses to Covad Data Requests 21 and 61
10 (RC-2). Exhibit 2353 is Responses to Covad Data
11 Requests 5 and 18 (RC-3). Exhibit 2354 is Responses to
12 Covad Data Requests 54, 56 and 61 (RC-4). Exhibit 2355
13 is Response to Covad Data Request 22 (RC-5). Exhibit
14 2356 is Qwest Affidavit of Weidenbach, 2/5/02 (RC-6).
15 Exhibit 2357 is Response to Covad Data Request 71
16 (RC-7). Exhibit T-2358 is Second Supplemental Response
17 Testimony, 3/22/02 (RC-T2). Exhibit C-2359 is Excerpt
18 from Response to Covad DR 60 (RC-1). Exhibit C-2360 is
19 Excerpt from Response to Covad DR 60 (RC-2). Exhibit
20 C-2361 is Excerpt from Response to Covad DR 60 (RC-3).
21 Exhibit C-2362 is Excerpt from Response to Covad DR 60
22 (RC-4). Exhibit C-2363 is Excerpt from Response to
23 Covad DR 60 (RC-5). Exhibit C-2364 is Excerpt from
24 Response to Covad DR 60 (RC-6). Exhibit C-2365 is
25 Excerpt from Response to Covad DR 60 (RC-7).

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1

2 Whereupon,

3

RICHARD CABE,

4 having been first duly sworn, was called as a witness

5 herein and was examined and testified as follows:

6

7

JUDGE BERG: Thank you, sir.

8

9

D I R E C T E X A M I N A T I O N

10 BY MS. DOBERNECK:

11

Q. Good afternoon, Dr. Cabe, can you please
12 state your name and business address for the record.

13

A. My name is Richard Cabe. My business address
14 is 221 I Street, Salida, Colorado 81201.

15

Q. And for purposes of this proceeding, have you
16 been retained by Covad Communications Company to provide
17 testimony on behalf of Covad?

18

A. Yes, I have.

19

Q. Are you the same Richard Cabe who filed
20 supplemental response testimony in this proceeding as
21 well as second supplemental response testimony?

22

A. Yes, I am.

23

Q. And do you have what has been marked as
24 Exhibit T-2350, which is the supplemental response
25 testimony, up there with you on the stand?

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1 A. Yes, I do.

2 Q. And do you also have with you on the stand
3 the exhibits that were attached to that supplemental
4 response testimony and which have been marked 2351
5 through 2357, or in other words through RC-7?

6 A. I believe so, the RC-7 is off of the Xerox
7 that I have, but I believe that -- I believe I do have a
8 complete set of exhibits here.

9 Q. Great, thank you. As you sit here today, do
10 you have any changes to the exhibit marked T-2350, which
11 is your supplemental response testimony?

12 A. Yes, I do. There's one section in here that
13 suffered from confusion about what is in an RT that
14 arises from Qwest's change of terminology and departure
15 from industry standard terminology, and I would omit
16 that section today.

17 Q. And can you, for the record, can you identify
18 the section that will be struck from your supplemental
19 response testimony, which is also T-2350?

20 A. It's the section beginning on page 24 labeled
21 Qwest cost study is simply wrong to include copper
22 feeder facilities.

23 Q. So we begin the strike out at that point?

24 A. That's correct.

25 Q. And where does the strike out end?

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1 A. On page 28, the strike out ends before the
2 section labeled pricing UNEs needed for advanced
3 services.

4 Q. So the last line that would be struck out on
5 page 28 states, including the cost of DLC over copper in
6 its UPS cost study?

7 A. That's correct.

8 Q. Okay. And with the change to your
9 supplemental response testimony, is that testimony
10 correct and accurate to the best of your knowledge and
11 belief?

12 A. Yes, it is.

13 MS. DOBERNECK: Your Honor, I would like to
14 move for the admission of T-2350 and the exhibits that
15 are attached to T-2350, and those are 2351 through 2357.

16 MS. ANDERL: No objection.

17 JUDGE BERG: Those exhibits are admitted, and
18 it is noted that there is a strikeout beginning on page
19 24 and continuing through page 28 of that exhibit.

20 MS. DOBERNECK: Your Honor, for procedural
21 clarity, would you like me to resubmit an errata or
22 replacement pages for Dr. Cabe's testimony, or is the
23 notation of the strikeout sufficient for purposes of our
24 record?

25 JUDGE BERG: The replacement is preferred,

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1 and the Commission is reluctant to go into exhibits that
2 have been submitted by parties and to make changes to
3 them. I think that would certainly assure Covad that
4 the exhibit has been modified the way it intends.

5 MS. DOBERNECK: I will do so.

6 BY MS. DOBERNECK:

7 Q. Turning to your second supplemental response
8 testimony, Dr. Cabe, that's been marked as T-2358, do
9 you have that with you up there on the stand?

10 A. Yes, I do.

11 Q. And do you have the seven exhibits that were
12 attached to your second supplemental response testimony,
13 which have been designated as C-2359 through C-2365?

14 A. Yes, I do.

15 Q. Do you have any changes or corrections to
16 your second supplemental response testimony?

17 A. No, I don't.

18 Q. So as you sit here today, is that testimony
19 correct and accurate to the best of your knowledge and
20 belief?

21 A. Yes, it is.

22 MS. DOBERNECK: I would like to move for the
23 admission of T-2358 as well as the exhibits to that
24 testimony, which are C-2359 through C-2365.

25 MS. ANDERL: No objection.

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1 JUDGE BERG: All right, those exhibits are
2 admitted.

3 Do we also have a stipulation between counsel
4 for the admission of the exhibit that has been marked
5 2366, C-2366?

6 MS. DOBERNECK: We do, Your Honor, we
7 stipulate to the admission of that exhibit.

8 JUDGE BERG: All right, that exhibit is
9 admitted.

10 MS. ANDERL: Thank you. And, Your Honor,
11 just so it's clear, that is a Covad data request and
12 Qwest's supplemental response, which is what the S1
13 means after the 04-060S1. That response references
14 three confidential attachments, A, B, and C. By
15 agreement between the parties, we are not providing
16 attachments B or C but only confidential attachment A.

17 JUDGE BERG: Thank you for that additional
18 notation.

19 MS. ANDERL: So that there's not concern
20 later that it's incomplete.

21 JUDGE BERG: Somebody would notice it sooner
22 or later, usually later.

23 MS. ANDERL: Exactly.

24 MS. DOBERNECK: And the witness is available
25 for cross.

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1 MS. ANDERL: I'm ready, I'm ready.

2

3 C R O S S - E X A M I N A T I O N

4 BY MS. ANDERL:

5 Q. Good afternoon, Dr. Cabe.

6 A. Good afternoon.

7 Q. You have appeared and testified before this

8 Commission on prior occasions in this and other cost

9 dockets; is that right?

10 A. Yes, I have.

11 Q. And you were here in Part A talking about the

12 appropriate price for the high frequency portion of the

13 loop; is that right?

14 A. Yes, I was.

15 Q. Okay. And now I recall that you filed

16 testimony in Part B on behalf of Covad but that that

17 testimony was subsequently adopted by Mr. Klick; does

18 that sound familiar to you?

19 A. That sounds vaguely familiar.

20 Q. Vaguely because you probably weren't here?

21 A. Well, I wasn't here. I remember also

22 appearing telephonically in some portion of this.

23 Q. Do you recall if you did or didn't testify in

24 Part B, and if so, if you did, on what issues you

25 presented testimony?

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1 A. I thought you just said that in Part B I
2 talked about the cost of the high frequency portion of
3 the loop.

4 Q. That would have been in Part A.

5 A. That was Part A?

6 Q. Right.

7 A. In Part B, I'm not sure. It seems like I --
8 it seems like I -- perhaps that's the one where I
9 appeared telephonically, and that was on behalf of MCI,
10 and I don't remember honestly what the issue was.

11 Q. Okay. And so you don't specifically recall
12 whether you filed testimony that was, for any party,
13 that was adopted by Mr. Klick?

14 A. I don't specifically remember that. I don't
15 doubt it could have happened.

16 Q. Now you talk about basically two issues,
17 unbundled packet switching and cooperative testing; is
18 that accurate?

19 A. That's correct.

20 Q. And on the unbundled packet switching issues,
21 you make a recommendation to the Commission, I think,
22 right at your testimony 2350 on pages 19 forward I guess
23 generally with regard to Qwest's cost proposal for
24 unbundled packet switching. You did not propose
25 specific costs or prices for those elements, did you?

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1 A. No, I couldn't from the information that was
2 available to me.

3 Q. And so is it your recommendation to the
4 Commission here that Qwest simply be ordered to refile
5 new information in a later phase of this docket or
6 another proceeding?

7 A. I make no recommendation about how it should
8 be handled procedurally, but my recommendation is that
9 the information that's before you now is not adequate to
10 make any determination about what TELRIC, the TELRIC
11 costs of these things amounts to and that Qwest needs to
12 come forward with evidence justifying its motivations
13 for installing the particular technology that it has
14 chosen, which strong evidence suggests is not the least
15 cost forward looking technology. And however it's done
16 procedurally, Qwest needs to be ordered to produce
17 TELRIC compliant cost estimates.

18 Q. Okay. Now on page 3 of your testimony 2350,
19 you reference a recommendation that you state is now
20 before the Commission, that there's a need to open a new
21 docket?

22 A. Yes, I see that.

23 Q. Is that then --

24 A. I'm sorry, I didn't see it, I remember it
25 though.

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1 Q. Okay.

2 A. Okay, I see it now.

3 Q. So to the extent that you don't have a
4 procedural recommendation yourself in terms of how this
5 matter is handled, you're indicating there that you're
6 concurring in what you believe to be another
7 recommendation that's currently before the Commission?

8 A. That's correct.

9 Q. Have you been following the process of that
10 docket that you reference there, the SGAT 271 proceeding
11 in Washington?

12 A. No, I haven't.

13 Q. Are you aware what terms and conditions have
14 been ordered as the terms and conditions under which
15 Qwest must offer unbundled packet switching?

16 A. No, I haven't, and I understand that that
17 might be part of the subject matter of the proceeding
18 that was suggested in the order that I cite in my
19 testimony.

20 Q. Are you familiar with the FCC's requirements
21 with regard to the circumstances under which an ILEC is
22 required to offer unbundled packet switching?

23 A. Generally, I haven't studied them in the last
24 few days, but I'm generally aware of what they are.

25 Q. Is it fair to say that there are four

5001

1 separate and distinct conditions that must be met before
2 an ILEC is obligated to offer unbundled packet
3 switching?

4 A. There are four conditions.

5 Q. And would you be willing to accept subject to
6 your check that the Washington Commission has at least
7 to date affirmed those four conditions as appropriate
8 for the requirement to offer unbundled packet switching?

9 A. Subject to check.

10 Q. Now did you read Ms. Million's testimony
11 where she expressed surprise that Covad was not familiar
12 with Qwest's proposal for line sharing over fiber fed
13 loops, because at least it was Qwest's belief that that
14 had been discussed in Part B?

15 A. Yes, I did read that.

16 Q. And did you note that she cited in her
17 testimony to a transcript from the Part B proceeding and
18 Ms. Brohl's, B-R-O-H-L, testimony in that proceeding?

19 A. I vaguely recall that.

20 Q. Okay. After reading that testimony, did you
21 review that transcript?

22 A. No, I didn't, it's not something that -- it's
23 not something that I heard during the -- I certainly
24 wasn't aware of that before it was mentioned, and I saw
25 no need to review it.

5002

1 Q. You state in your testimony that it's Covad's
2 position, at least in this Part D of the docket, that it
3 was unaware that Qwest was proposing its DA Hotel or
4 remote collocation of DSLAMs as its solution or proposal
5 for line sharing over fiber fed loops; is that right?

6 A. I think it's my testimony that I was not
7 aware. I don't know about Covad's position or what
8 Covad in general was aware of.

9 Q. And could you turn to your Exhibit RC-5,
10 which should be Exhibit 2355.

11 A. (Complies.)

12 Q. RC-5 to your direct testimony or your first
13 round of testimony.

14 A. You know --

15 Q. And I think that's where you are. Are your
16 pages cut off on the top?

17 A. They are consistently cut off on the top.

18 Q. Could you turn to the affidavit of Georgeanne
19 Weidenbach.

20 A. Sure.

21 Q. And it's the document right before that.

22 A. Okay. Sorry.

23 MS. ANDERL: Is that 2355? I'm sorry, Your
24 Honor, I misplaced half of my exhibit list. It wasn't
25 stapled.

5003

1 JUDGE BERG: It is.

2 MS. DOBERNECK: Yes, that's 2355 is the
3 response to Covad Data Request 22.

4 MS. ANDERL: Okay.

5 MS. TENNYSON: The affidavit is 2356.

6 MS. ANDERL: Thank you.

7 THE WITNESS: And it's the one page document?

8 MS. ANDERL: Yes.

9 THE WITNESS: Okay.

10 BY MS. ANDERL:

11 Q. So at least as of the date that you filed
12 your testimony on the 14th of February, you were aware
13 of that data request response?

14 A. I have seen this response.

15 Q. Okay. And is that the response then that
16 made it clear to you that the DA Hotel proposal was
17 Qwest's solution for line sharing over fiber fed loops?

18 A. No, it certainly didn't. This response, the
19 way I read this response was that you were basically
20 refusing to provide anything about line sharing over
21 fiber, and it was not at issue in this proceeding.

22 Q. Did the response make it clear to you Qwest's
23 position that consistent with a prior Commission order
24 in this docket the matter had been addressed in Part B?

25 A. I see that you refer to Part B. I certainly

5004

1 didn't come away from a reading of this response with an
2 understanding of the network that you had chosen or the
3 -- or what evidence you were offering in this proceeding
4 relative to line sharing over fiber.

5 Q. And if there was such evidence presented in
6 the Part B portion of this proceeding, you did not go
7 back and attempt to review that; is that correct?

8 A. That's correct.

9 Q. Okay. Let's talk for a little while about
10 cooperative testing. Now you received through your --
11 through Covad's counsel several stacks of documents from
12 -- that were Qwest's response and supplemental response
13 to Covad Data Request Number 60; is that right?

14 A. Yes, I did.

15 Q. And would it be fair to say that those
16 attachments, which are not admitted here, but numbered
17 in several hundred pages?

18 A. It was a stack about this high.

19 MS. DOBERNECK: Your Honor, just to clarify
20 for the record, excerpts of that data request are
21 attached to Dr. Cabe's testimony, so portions are, but
22 certainly not the complete set of documents that were
23 responsive to it.

24 MS. ANDERL: I accept that clarification.

25 BY MS. ANDERL:

5005

1 Q. Dr. Cabe, when you said it was a stack about
2 this high, would you say about eight inches?

3 A. About eight inches.

4 Q. Great. And those were -- well, how would you
5 characterize those records, field notes from
6 installation and testing activities?

7 A. They were -- they were a log of Qwest
8 activities associated with installations, and they
9 included varying levels of detail about what was done in
10 a particular installation.

11 Q. And they were all installations for Covad
12 orders for unbundled loops; is that right?

13 A. That's correct.

14 Q. And we want to be careful, Dr. Cabe, not to
15 put any numbers in terms of the quantity of orders on
16 the record, so to the extent that you're familiar with
17 how many orders Covad gave us in any month for unbundled
18 loops, please don't say that out loud.

19 A. Okay.

20 MS. DOBERNECK: Thank you.

21 Q. Is it correct that you reviewed orders for
22 the entire month of January, or at least orders that
23 Qwest represented to you were for the entire month of
24 January?

25 A. Yes, I believe so.

5006

1 Q. And then orders also for one week in November
2 and one week in December of the year 2001?

3 A. That's what I recall.

4 Q. Okay. And it was your review of those
5 documents that then prompted the submission of your
6 second piece of testimony, Exhibit 2358?

7 A. That's correct.

8 Q. Okay. And as Ms. Doberneck kindly reminded
9 me, the exhibits you attached to your testimony are
10 excerpts from the documents you reviewed?

11 A. Yes, they are.

12 Q. And are those, you said that was a log,
13 they're generally prepared in a kind of a shorthand,
14 aren't they?

15 A. Yes, they are, they don't -- they don't abide
16 by the usual conventions of grammar and spelling.

17 Q. Thank you. And if you would just turn to the
18 first one, your Exhibit 1 to your 2358, so that's
19 C-2359.

20 A. Okay.

21 Q. Just in general, the convention on these
22 documents appears to be the date of the activities in
23 the far left-hand column; is that correct?

24 A. That's correct, and it's also useful to know
25 that the timing goes from the bottom up.

5007

1 Q. Okay. And is it also the timing represented
2 there on a 24 hour clock?

3 A. Yes, I believe it is.

4 Q. Military type time?

5 A. (Nodding head.)

6 Q. And the blacked out areas are, as I
7 understand it, areas that either did not pertain to the
8 orders you discussed or areas -- well, is that at least
9 part if not all of it?

10 A. That's my understanding. I didn't personally
11 do the redacting.

12 Q. Okay.

13 MS. DOBERNECK: And, Your Honor, for purposes
14 of clarifying the record, counsel did the redaction to
15 redact information that may have been confidential to
16 Qwest such as the sort of code entries and things like
17 that or information that did not pertain to the examples
18 Dr. Cabe provided. Since both parties claimed
19 confidentiality as to the document itself, I did it to
20 ensure that we were as limited as possible.

21 MS. ANDERL: Just so that it's clear, we
22 don't have a problem with that. I'm just trying to
23 explain the exhibit for the record.

24 JUDGE BERG: All right, thank you, that
25 thought had occurred to me.

5008

1 BY MS. ANDERL:

2 Q. It may be that these documents on a
3 non-redacted basis also contained purchase order numbers
4 or order numbers or other identifying codes.

5 A. Names and addresses.

6 Q. And my review of those exhibits that you
7 presented indicates that most if not all of that
8 information has been redacted; does that comport with
9 your understanding?

10 A. Yes, it does.

11 Q. Now let's stick with the January data for
12 right now. Did you review or attempt to review each
13 order or the field notes for each order?

14 A. I probably -- I don't want to say that I
15 looked at every single one. I didn't try to be
16 exhaustive. I went through picking out illustrative
17 examples of the phenomena that occur.

18 Q. So based on your review, can you tell me
19 today for the month of January, and if we need to make
20 this confidential we certainly can, but can you tell me
21 the number of times for the orders that were submitted
22 in January that Covad claims Qwest approached Covad for
23 testing of loops that were not ready to be turned over
24 to Covad?

25 A. No, I can't tell you today. I can -- I

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1 picked out several illustrations of that phenomenon, and
2 there are many more that can be found in the data that I
3 looked at. I picked certain ones because they were very
4 clear illustrations of the points that I wanted to make,
5 and I don't believe that the nature of the data admits
6 the possibility of calculating some percentage. When I
7 first started to look at it, I imagined that I might be
8 able to calculate a percentage of the time that a
9 particular occurrence happens in the data, but it turned
10 out that that was not possible for reasons described in
11 my testimony, in particular that the nature of the
12 documentation is that there are some instances that some
13 -- some of the records suggest that something else is
14 going on, and I think it's a very strong suggestion, and
15 that -- that didn't allow me to have any confidence in
16 calculating any sort of percentage that you might come
17 up with.

18 MS. DOBERNECK: I'm sorry, to clarify, when
19 you referred to as described in your testimony, you are
20 talking about your second supplemental testimony.

21 THE WITNESS: That's correct.

22 MS. DOBERNECK: Thank you.

23 BY MS. ANDERL:

24 Q. Now, Dr. Cabe, do you understand it to be
25 Qwest's position in this case that when an unbundled

5010

1 loop is ordered with cooperative testing, Qwest will
2 conduct a performance test on the loop prior to
3 contacting the CLEC to perform the cooperative testing?

4 A. That's my understanding.

5 Q. Okay. And did your review of the records for
6 the orders in January show that that -- occasions where
7 that process was, in fact, followed?

8 A. Well, it's -- it's hard to tell from these
9 records exactly what testing was done, and the point of
10 the examples that I chose was that whether it's done or
11 not, it isn't effective. And, you know, just because
12 somebody goes out and performs some test and, you know,
13 makes a note in a log or fails to make a note in a log,
14 that really isn't relevant to the issue at hand. The
15 question at hand is, does Qwest test adequately to
16 accomplish the purpose of insuring that every loop
17 that's being offered for delivery is indeed a working
18 loop that satisfies Qwest's technical specifications for
19 that type of loop, and I found that that was not the
20 case in many instances. I provided some examples.

21 Q. So is it your testimony that you didn't see a
22 single instance where the field notes or log reflected a
23 performance test and confirmation that the loop was good
24 prior to contacting -- prior to Qwest contacting Covad
25 for cooperative testing?

5011

1 A. And then on cooperative testing the loop did
2 turn out indeed to be good? I saw many instances of
3 that happening.

4 Q. Now do you know either of your own knowledge
5 or from information provided to you by Covad whether in
6 the year 2001 or in the year 2002 to date whether Covad
7 has ordered loops in Washington from Qwest without
8 cooperative testing, in other words on a basic install
9 basis?

10 A. I don't know one way or the other.

11 Q. Do you know what kind of performance tests --
12 well, let me back up a minute.

13 Do you recognize and accept the difference
14 between performance testing and cooperative testing that
15 Qwest has explained in its testimony and data request
16 responses?

17 A. Well, my understanding is that -- my
18 understanding is that Qwest's position is that they
19 undertake performance testing of every loop that's being
20 offered for delivery no matter what the installation
21 option chosen is.

22 Q. Okay. And that those performance tests are
23 tests designed to determine whether there are certain
24 types of faults on the loop, including faults that have
25 been described as opens breaks, grounds, or shorts?

5012

1 A. Or foreign volts or whatever, but my point
2 really is not how many times somebody checks off a box
3 that says that they did a test, but how effective those
4 tests are. And the, you know, the examples in my
5 testimony are illustrations of the phenomenon of whether
6 tests -- whether Qwest did testing or not, the loop when
7 it was offered for delivery was not working to those
8 specifications. And, you know, I provided illustrative
9 examples, and Mr. Hubbard's rebuttal to that essentially
10 corroborates my conclusion.

11 Q. Do you understand from your review of the
12 documents and the testimony in this docket that a CLEC
13 who orders cooperative testing is able to order tests or
14 order Qwest to conduct tests that are different from and
15 additional to the tests Qwest performs for performance
16 testing?

17 A. That's my understanding.

18 Q. And just as an example, during cooperative
19 testing, the parties could perform something called a
20 loop back test that is not something that Qwest performs
21 during the performance testing portion?

22 A. I don't -- I don't know whether that's
23 something that Qwest routinely performs during the
24 performance testing portion. Qwest's responses to data
25 requests have indicated that they test the entire loop

5013

1 from the -- from the CLEC's point of demarcation on the
2 ICDF in the central office, which is where the -- which
3 is where the pair goes into the -- goes off to the
4 CLEC's collocation, Qwest has indicated that they test
5 all the way from that point to the customer's point of
6 demarcation at the customer's premises. And it's clear
7 from the record that that's not the case, and it's, you
8 know, it's corroborated in both of the examples in
9 Mr. Hubbard's testimony.

10 Q. I don't think that that was really my
11 question, Dr. Cabe, so let me try it again.

12 Are you aware of whether or not Qwest
13 performs a loop back test or is even able to perform a
14 loop back test during the performance testing part of
15 testing the loop?

16 A. Well, I know that Qwest certainly could
17 perform a loop back test, and it's -- I'm not certain
18 whether they routinely do or not.

19 Q. Would you accept subject to your check that
20 Qwest's data request responses indicate that a loop back
21 test is not a part of the standard performance testing?

22 MS. DOBERNECK: I'm not objecting per se, but
23 I would like a specification of what response to what
24 data request.

25 MS. ANDERL: Oh, I knew you were going to ask

5014

1 me to do that. I was hoping that the witness could
2 remember and we could just streamline, and I -- I will
3 find it.

4 MS. DOBERNECK: Is it one of the --

5 MS. ANDERL: It's one of the ones that's been
6 admitted. It's not one of the ones he admitted.

7 MS. DOBERNECK: Ah.

8 MS. ANDERL: But one that came through, came
9 in at Covad's offer through one of Qwest's witnesses. I
10 will find it.

11 MS. DOBERNECK: Okay.

12 JUDGE BERG: Even though we have varied
13 slightly from the practice, I think parties know that
14 the intended use of a subject to check is a factual
15 matter that can be checked by evidence in the record.
16 And so in this instance, even though it will take a few
17 moments to survey the exhibits, it would be appropriate
18 from an evidentiary point to do so.

19 We will be off the record.

20 (Discussion off the record.)

21 MS. ANDERL: Thank you, Your Honor. On the
22 break, we have directed Dr. Cabe to Exhibit 2157.

23 BY MS. ANDERL:

24 Q. Do you see that, do you have that document,
25 Dr. Cabe?

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1 A. Yes, I do.

2 Q. And that was in relationship or in regards to
3 a question that I asked you about the types of tests
4 that Qwest has said it performs during the performance
5 testing part of the loop delivery. Do you see there the
6 listing in that response?

7 A. The listing?

8 Q. Listing of the types of tests that Qwest
9 typically performs for --

10 A. Yes, I do.

11 Q. -- different kinds of loops --

12 A. Yes.

13 Q. -- during the performance testing process?

14 A. Yes, I do.

15 Q. And do you know or would Covad be willing to
16 stipulate that the type of loop that we're talking about
17 here in connection with Covad's business is typically
18 the 2 and 4-wire non-loaded loop?

19 A. That's my understanding.

20 Q. And that's at the second bullet point?

21 A. Although -- yeah, that's my understanding,
22 although I believe that there are probably some -- also
23 some ISDN loops involved. I'm not certain of that.

24 MS. DOBERNECK: I think we can safely say for
25 purposes of this record 2 and 4-wire as well as ISDN

5016

1 loops.

2 Q. All right. And, Dr. Cabe, in that data
3 request response, Qwest has not listed a loop back test
4 as one of the standard elements of a performance test,
5 has it?

6 A. No, it hasn't.

7 Q. Okay. But is it your understanding that
8 Covad could ask Qwest to conduct a loop back test if
9 Covad ordered cooperative testing from Qwest?

10 MS. DOBERNECK: Your Honor, I'm going to
11 object, Dr. Cabe is sort of an economic and policy
12 witness. I think we're getting into technical areas,
13 and I think we need some foundation to see if Dr. Cabe
14 even actually has the knowledge to answer this question.

15 MS. ANDERL: I can certainly do that. I
16 believed he would be able to answer the question just
17 based on his review of the testimony of the other
18 witnesses in this docket.

19 BY MS. ANDERL:

20 Q. Dr. Cabe, do you know, well, and I mean I
21 guess I don't know if you are in a position to know
22 this, but are you -- do you understand from Qwest's
23 testimony and data request responses in this docket that
24 it is during cooperative testing that a CLEC can specify
25 to Qwest that tests can be performed in addition to

5017

1 those listed in this Exhibit 2157?

2 A. It's my understanding that the CLEC can
3 request a variety of tests, and as to specific types of
4 tests that might be requested, I would refer to
5 Mr. Donovan.

6 Q. Okay, that's what I thought. Can we still
7 talk about testing in general though without reference
8 to specific types of tests?

9 A. Sure.

10 Q. In the provision of an unbundled loop to
11 Covad, Qwest can test its own portion of the loop prior
12 to delivery to Covad; is that correct?

13 A. That's correct.

14 Q. Okay.

15 A. And indeed it says in this response to this
16 data request, the last paragraph says:

17 During the performance testing, Qwest
18 tests the circuit from the network
19 interface at the customer's premise to
20 the interconnect distribution frame.

21 Q. And the sentence after that says:
22 In a cooperative test environment, the
23 tests are extended by the CLEC beyond
24 the ICDF or beyond the network interface
25 at the customer premise.

5018

1 Do you see that?

2 A. Yes, I see that, and it's my understanding --

3 Q. Do you have an understanding of what that
4 means?

5 A. Yes, I do.

6 Q. Can you explain that, please?

7 A. It's my understanding that what that means is
8 that during cooperative testing, the portion of the --
9 the -- during cooperative testing, the facilities from
10 the ICDF, which is a Qwest facility in a Qwest central
11 office, to -- into the CLEC's collocation space,
12 including certain facilities of the CLEC in their
13 collocation space, can be included. I have never
14 understood how it could be extended beyond the network
15 interface at the customer interface.

16 But the point that I would like to make about
17 this is that the faults that I noted and for which I
18 provided illustrative examples in my testimony occur
19 within the Qwest portion of the network. These are not
20 problems that arose because the Covad portion of the
21 network was added during cooperative testing. They were
22 problems that were there in the Covad -- in the Qwest
23 facilities and were only identified when they were
24 tested during cooperative testing. So they weren't
25 identified by Qwest before the loop was offered for

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1 delivery.

2 Q. Thank you, Dr. Cabe. Yes, I understand that
3 that is your testimony.

4 Do you think that Qwest should offer a
5 cooperative testing option for those CLECs who wish to
6 test the loop back into their network?

7 A. I don't -- I don't have an opinion about that
8 one way or the other. The reason that Covad orders
9 cooperative testing and given the nature of the way that
10 cooperative testing was initially introduced, I suspect
11 the truth -- the same is true for most CLECs, what they
12 want to do is just assure that the loop that's being
13 delivered to them by Covad -- by Qwest is -- functions
14 properly.

15 Q. Now, Dr. Cabe, you're not directly employed
16 by Covad, right?

17 A. No, I'm certainly not.

18 Q. Can you describe the extent to which you are
19 involved in the day-to-day business operations at Covad?

20 A. Not at all.

21 That was a description, not an answer.

22 Q. Good short answer. Do you -- so your
23 testimony today about why Covad orders cooperative
24 testing from Qwest, that testimony is based on
25 information given to you by Covad or representations

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1 that Covad has made to you?

2 A. That's correct.

3 MS. ANDERL: I don't have any other questions
4 for this witness, thank you.

5 JUDGE BERG: Thank you, Ms. Anderl.

6 Ms. Tennyson.

7 MS. TENNYSON: We do not have any questions.

8 JUDGE BERG: All right.

9

10 E X A M I N A T I O N

11 BY JUDGE BERG:

12 Q. Dr. Cabe, I have one line of questions based
13 upon reference in your supplemental response testimony.
14 This may be a question for Mr. Cabe, it does relate to
15 testing, but let me direct your attention to page 10 of
16 your supplemental response testimony, that is Exhibit
17 T-2350.

18 MS. DOBERNECK: I'm sorry, Your Honor, you
19 said page 10?

20 JUDGE BERG: Page 10.

21 MS. DOBERNECK: Thank you.

22 A. Yes, I have that.

23 BY JUDGE BERG:

24 Q. All right. And this question is somewhat
25 generated by your response to the question, in what way

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1 does Covad's loop testing activity benefit Qwest, and
2 the foundation question is whether you have knowledge
3 that Qwest provides data connections on a regular basis
4 to its customers.

5 A. Yes, Qwest does.

6 Q. All right. And do you know whether Qwest
7 provides ongoing testing on those data lines to its
8 customers?

9 A. I'm sure that they do. I want to defer to
10 Mr. Donovan, but the one point in it that I would like
11 to make that's the -- the distinction that I would
12 suggest that Mr. Donovan should elaborate on is that
13 when Qwest is preparing a loop for delivery to Covad
14 say, what they have is a loop that's sitting there and
15 it's, you know, in the simplest case it's a pair of
16 copper wires that has one end at the ICDF and the other
17 end at some customer's premises.

18 And in between there, it goes through all
19 sorts of places. It goes through places where it gets
20 attached to a terminal, and the other side of that
21 terminal is a continuation of the same pair of wires,
22 and they're broken but for the terminals making the
23 connection, and those are called cross connects. And it
24 makes -- it goes through places -- another point of
25 fault that it goes through commonly, or always I expect,

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1 is called a heat coil. And a heat coil is basically a
2 fuse in the Qwest central office, and if that -- if that
3 loop was actually being used for a voice service or for
4 a data service that Qwest is providing to one of their
5 customers, the end of the loop would be attached to some
6 piece of equipment, and that piece of equipment would
7 provide for Qwest to do some testing in a mechanized
8 fashion in a very efficient manner.

9 A loop, a UNE loop that's being delivered to
10 Covad isn't attached to anything until they do the work
11 in the central office to attach it to Covad's equipment
12 inside their collocation. So when Qwest calls for a
13 cooperative test, what they're doing is they're asking
14 Covad to use their equipment to which this wire -- pair
15 of wires is attached. They're asking them to use the
16 Covad equipment in the same way that Qwest would use
17 their equipment that the wires terminate on in a
18 situation where they were providing their own service.
19 That's the very efficient way to thoroughly test the
20 loop.

21 And with your indulgence, let me just go one
22 step further and say, I mentioned the fuse, the heat
23 coil, one of the illustrative examples in my testimony
24 was of a situation where a heat coil, according to the
25 Qwest records, the heat coil was bad, and that was

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1 identified at cooperative testing, but it hadn't been
2 identified by Qwest testing. Well, Mr. Hubbard's
3 rebuttal to that said that, I didn't understand that the
4 heat coil had to be removed in order for Qwest to test
5 this loop. Well, fine. And then either the heat coil
6 wasn't put back in, or it was defective and it never got
7 tested. In fact, that heat coil is part of the loop
8 that never gets tested if you do it that way. On the
9 other hand, if you -- if Qwest relies on Covad because
10 the wires terminate on Covad equipment inside their
11 collocation, then the heat coil can be in place while
12 the loop is being tested, and if there's any problem
13 with that heat coil, it will be identified through that
14 testing in exactly the same way that Qwest would perform
15 tests if the equipment -- if the pair of wires
16 terminated on any piece of Qwest equipment inside the
17 central office. And I'm not an engineer, Mr. Donovan
18 may want to correct me if I have made any errors here,
19 but that's my understanding of it.

20 Q. Let's look beyond cooperative testing and
21 look at the subject of ongoing testing. And so the
22 question would then be whether you have knowledge that
23 Qwest provides ongoing testing, not testing that would
24 be considered cooperative testing to be performed
25 immediately after initiating service and handing the

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1 loop over so to speak, but ongoing testing.

2 A. I believe that it's common practice for local
3 exchange companies to do ongoing testing, and I'm sure
4 that Mr. Donovan can speak to that in great detail.

5 Q. All right. And do you have any knowledge of
6 the types of ongoing tests that would be provided?

7 A. For ongoing tests for a loop that is not in
8 service?

9 Q. That has been placed in service, do you have
10 any knowledge of the types of ongoing tests that would
11 be performed?

12 A. Let me defer to Mr. Donovan.

13 Q. All right. And then just to conclude this
14 line of questioning with you before taking it up later
15 with Mr. Donovan, if Qwest performed ongoing testing for
16 itself, wouldn't Qwest also do the same for Covad?

17 A. Well, I think again the big important
18 distinction here is whether the loop, the pair of wires,
19 is terminating on some piece of equipment that belongs
20 to Qwest. And in the case of a UNE loop that's going
21 into Covad's collocation area, that's not the case. And
22 so I defer entirely to Mr. Donovan, but it's my
23 understanding that there probably won't be any ongoing
24 testing in the situation of a loop that goes into
25 Covad's collocation space.

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1 JUDGE BERG: All right, those are the
2 questions that I have.

3 I suggest that before we turn to redirect we
4 go ahead and allow Qwest to conduct additional cross
5 based on my questions. It may streamline the process.

6 MS. ANDERL: I did just have one follow-up,
7 Your Honor, thank you.

8

9 C R O S S - E X A M I N A T I O N

10 BY MS. ANDERL:

11 Q. In response to a question by Judge Berg,
12 Dr. Cabe, you used the phrase when Qwest calls for a
13 cooperative test or when Qwest calls Covad for a
14 cooperative test. Is it your understanding that Qwest
15 would call Covad for a cooperative test in circumstances
16 where Covad has not ordered cooperative testing?

17 A. One of the examples that's in my testimony is
18 of a situation where a technician in the field was -- to
19 give you a short answer, I believe that that does
20 happen. One of the illustrations in my testimony is of
21 a situation where a technician in the field had some
22 question about the status of a particular loop, and the
23 central office work on installing that loop had already
24 been done so that the loop actually terminated on
25 Covad's equipment. And the technician just called Covad

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1 and said, this loop terminates on your equipment, will
2 you do a test for me. And so yes, I believe that does
3 happen.

4 Q. Isn't it correct, Dr. Cabe, that the
5 information that Covad requested from Qwest in that data
6 request was only for loops that had been ordered with
7 cooperative testing?

8 A. Yes, that's true, but this technician was
9 departing from your standard practices in any case, and
10 I, you know, if it's -- if it's a standard practice to
11 not call if it's a repair matter or for whatever
12 purpose, if it's efficient and, you know, technicians
13 cooperate with each other and try to -- try to solve
14 problems, it would be efficient for the technician to do
15 that, because in order for them to call Covad and get a
16 test on this thing, since it terminates on Covad
17 equipment, that's a very simple matter for -- to -- in
18 order to get a test on it internally for whatever
19 purpose, the test -- the testing capabilities are going
20 to be more expensive and perhaps more difficult to
21 perform.

22 Q. But I want to clarify, the example that you
23 gave just a moment ago, are you saying that that was a
24 loop that Covad had ordered without cooperative testing?

25 A. No, I'm not saying that, and I have -- I have

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1 not seen a log for a loop ordered without cooperative
2 testing or I -- nor have I seen specific evidence of a
3 loop that had already been installed a long time ago and
4 was now being repaired where this happens. But it
5 certainly can happen, and I wouldn't be surprised if it
6 does, although it is probably a departure from Qwest's
7 standard procedures.

8 MS. ANDERL: Okay, thank you for that
9 clarification. I have nothing more at the moment.

10 JUDGE BERG: All right.

11 MS. TENNYSON: Your Honor, if I might, I have
12 one question of clarification.

13 JUDGE BERG: Yes, go ahead, Ms. Tennyson.

14

15 C R O S S - E X A M I N A T I O N

16 BY MS. TENNYSON:

17 Q. Dr. Cabe, do we have in your testimony or
18 exhibits a quantification of the percentage of loops
19 delivered to Covad from Qwest that Covad believes were
20 faulty?

21 A. No, we don't, and my testimony does explain
22 that I had actually hoped to do something like that, and
23 I certainly would do that if I could be confident in the
24 numbers. But because of deficiencies in the data, I
25 can't be confident. I'm pretty sure that there are

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1 instances where that happens that are not documented in
2 the data that I have been able to examine.

3 MS. TENNYSON: Okay, thank you, I have
4 nothing further.

5 JUDGE BERG: All right, thank you.

6 Ms. Doberneck.

7 MS. DOBERNECK: I have a few questions.

8

9 R E D I R E C T E X A M I N A T I O N

10 BY MS. DOBERNECK:

11 Q. Dr. Cabe, in response to one of Ms. Anderl's
12 most recent questions, you described a scenario in which
13 a Qwest technician called up Covad outside of a
14 cooperative test; is that right?

15 A. Yeah, I don't know what you want to call it,
16 but the Covad -- the technician, the Qwest technician,
17 called Covad knowing that this loop terminated on Covad
18 equipment and just asked for a test.

19 Q. Is that also something that you have referred
20 to in your testimony as a pretest?

21 A. Well, the business of a pretest, it's not
22 clear what a pretest is. My testimony explains that
23 Qwest seems to call -- Qwest seems to name the first
24 instance of testing by the CLEC as a pretest, and then
25 as soon as the CLEC says it tests fine, then the Covad

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1 implementor, test implementor, asks Covad to accept
2 delivery of the loop.

3 Q. Did you mean to say the Qwest implementor?

4 A. Did I --

5 Q. You said the Covad implementor.

6 A. I'm sorry, the Qwest implementor then asks
7 Covad, the Covad tester, if it will be okay to call this
8 a cooperative test and you will accept delivery on the
9 loop. And no additional testing happens, there's
10 nothing different between cooperative testing and
11 pretesting in the sense of tests that are done. It's
12 just what Qwest wants to call it.

13 Q. And do you provide an example of that in your
14 testimony?

15 A. Yes, there's an example or two of that. It
16 may appear in several of them. It's -- that happens in,
17 oh, in 95% of the ones that I have looked at.

18 Q. Okay. You also responded to one of Mrs. --
19 Ms. Anderl's questions.

20 MS. DOBERNECK: Excuse me, I recognize you
21 did not change your name when you got married.

22 JUDGE BERG: No, but he is Mr. Anderl.

23 MS. DOBERNECK: I have a Mr. Doberneck back
24 in Denver, so.

25 MS. ANDERL: I thought my mother was in the

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1 room.

2 BY MS. DOBERNECK:

3 Q. So all frivolity aside, you did respond to
4 one of Ms. Anderl's questions that you did, in fact, see
5 instances where there was performance testing, a problem
6 was detected, and then Qwest fixed the problem. Does
7 that change your position or your recommendation to this
8 Commission as to whether Qwest should be permitted to
9 charge for cooperative testing?

10 A. No, the -- Qwest's proposal to -- no, the
11 issue of what tests Qwest performs is really irrelevant.
12 Qwest has a responsibility to deliver a loop that works,
13 and that's all that Covad is trying to accomplish
14 through cooperative testing is the ability to test loops
15 as they are delivered to see if indeed they work. And,
16 you know, Covad doesn't really want to have to stand
17 ready to test every single loop as it's delivered to
18 make sure that whatever testing Qwest has done has been
19 adequate to the task of ensuring that the loop works.
20 Covad would prefer to just be able to rely on Qwest to
21 deliver loops that will work.

22 The proposal to charge for Qwest's activities
23 in cooperative testing adds insult to injury. The CLEC
24 is injured when they have to stand ready to -- they have
25 to keep personnel and facilities ready to test every

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1 loop as it's offered for delivery. And to suggest that
2 the assistance in quality control that they give to
3 Qwest at the time of delivery causes Qwest to undertake
4 activities for which the CLEC ought to compensate them,
5 I mean I just regard it as preposterous.

6 Q. And my final question, Ms. Anderl started out
7 her line of questioning about whether you knew or didn't
8 know about the role line sharing over fiber played in
9 this particular Part D. Can you state why apparently
10 you were surprised that line sharing over fiber is part
11 of -- is at issue in Part D?

12 A. Well, the -- I guess I'm -- I'm quite -- I'm
13 quite surprised after reading the response to that data
14 request that Ms. Anderl directed me to, I thought that
15 that data request was telling me that it is not at issue
16 in this proceeding at all. When I saw Ms. Weidenbach's
17 affidavit in Minnesota, it became clear to me that what
18 Qwest was offering as UPS is in some cases anyway going
19 to be offered as Qwest's version of what line sharing
20 is, and I don't believe that that's an adequate
21 description of what line sharing is at all. And, you
22 know, I think that's very, very different from -- from
23 line sharing, and I -- so I was quite surprised. Do you
24 want me to ---

25 MS. DOBERNECK: I think that will be

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1 sufficient, thank you.

2 And I have no further questions.

3 JUDGE BERG: Ms. Anderl.

4 MS. ANDERL: I hesitate to wade in, but.

5

6 R E C R O S S - E X A M I N A T I O N

7 BY MS. ANDERL:

8 Q. Dr. Cabe, do you understand that Qwest's
9 proposal for line sharing over fiber fed loops is
10 actually the DA Hotel or remote terminal collocation
11 proposal?

12 A. That's my understanding. My understanding is
13 that Qwest is offering the DA Hotel, you can collocate
14 at each of these many, many facilities that are not
15 remote terminals in the normal sense of what a remote
16 terminal is, but they are distribution areas, and that's
17 -- that's part of it. There's --

18 Q. And if I could just follow up with a
19 question. And that when that remote terminal
20 collocation is not available and other circumstances are
21 met, then Qwest will offer unbundled packet switching.
22 Do you understand that to be the proposal?

23 A. That's my understanding of Qwest's proposal.

24 MS. ANDERL: Okay, I just wanted to be sure
25 that we were --

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1 Okay, that's all I have.

2 JUDGE BERG: Anything further, Ms. Doberneck?

3 MS. DOBERNECK: No, Your Honor.

4 JUDGE BERG: Anything else, Ms. Tennyson?

5 MS. TENNYSON: No.

6 JUDGE BERG: All right, Dr. Cabe, thank you
7 very much for being here and testifying and for your
8 patience and understanding. At this time, you're
9 excused from the stand and from the proceeding.

10 THE WITNESS: Thank you very much.

11 JUDGE BERG: You're very welcome.

12 This would be a good time to take about a 12
13 minute break, and let's be off the record.

14 (Recess taken.)

15 JUDGE BERG: I have one administrative matter
16 to take care of before we begin the testimony of Covad's
17 witness Mr. John Donovan, and that is with regards to
18 two exhibits that had been previously identified and
19 numbered and admitted to the record, there will be a
20 change in the numbering of those exhibits. Exhibit 2129
21 shall be renumbered Exhibit E-2100, and Exhibit 2099
22 shall be renumbered Exhibit E-2101.

23

24 (The following exhibits were identified in
25 conjunction with the testimony of JOHN C. DONOVAN.)

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1 Exhibit T-2370 is Reply Testimony of John
2 Donovan (JCD-T1). Exhibit 2371 is C.V. of John C.
3 Donovan (JCD-1). Exhibit 2372 is Alcatel Press Release,
4 dated November 17, 1999 (JCD-2). Exhibit 2373 is
5 Alcatel Product Brochure (JCD-3). Exhibit 2374 is
6 Alcatel Product Brochure (JCD-4).

7

8 JUDGE BERG: Are there any other matters
9 counsel wishes to address on the record before we begin?

10 Hearing nothing, Mr. Donovan, would you
11 please raise your right hand.

12

13 Whereupon,

14

 JOHN C. DONOVAN,
15 having been first duly sworn, was called as a witness
16 herein and was examined and testified as follows:

17

18 JUDGE BERG: Thank you.

19

20 D I R E C T E X A M I N A T I O N

21 BY MS. DOBERNECK:

22 Q. Good afternoon, Mr. Donovan. Could you state
23 your name and business address for the record.

24 A. Yes, my name is John C. Donovan, and my
25 business address is 11 Osborne Road, Garden City, New

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1 York 11530.

2 Q. And by whom are you employed, Mr. Donovan?

3 A. I'm employed by Telecom Visions Incorporated,
4 a consulting firm.

5 Q. And with respect to this Part D, are you
6 providing testimony on behalf of Covad Communications
7 Company?

8 A. Yes, I am.

9 Q. Are you the same John Donovan that filed
10 reply testimony in this Part D proceeding?

11 A. Yes, I am.

12 Q. And do you have that testimony in front of
13 you today?

14 A. Yes, I do.

15 MS. DOBERNECK: And for the record,
16 Mr. Donovan's reply testimony has been marked as Exhibit
17 T-2370.

18 BY MS. DOBERNECK:

19 Q. Do you have any changes to make to that
20 testimony as you sit here today?

21 A. Yes, I have one change.

22 Q. Can you please tell me what that change is.

23 A. Yes, that change is on page 3, right after
24 the first question, beginning of the answer, Covad
25 Communications, Inc. should actually be Covad

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1 Communications Company. And that's the only correction
2 I have.

3 Q. So with that single change, is your testimony
4 correct and accurate to the best of your knowledge and
5 belief?

6 A. Yes, it is.

7 MS. DOBERNECK: Your Honor, I'd like to move
8 for the admission of T-2370 as well as the exhibits that
9 are attached to that testimony, which are 2371 through
10 2374.

11 MS. ANDERL: No objection.

12 JUDGE BERG: Those exhibits are admitted.

13 MS. DOBERNECK: And Mr. Donovan is available
14 for cross.

15 JUDGE BERG: Thank you, Ms. Doberneck.

16

17 C R O S S - E X A M I N A T I O N

18 BY MS. ANDERL:

19 Q. Good afternoon, Mr. Donovan.

20 A. Good afternoon.

21 Q. Your education, experience, and training is
22 as an engineer; is that correct?

23 A. Engineer, construction person, manager, and
24 consultant.

25 Q. Not as an economist?

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1 A. Not an economist.

2 Q. Or a cost analyst?

3 A. That's correct.

4 Q. Okay. And as I recall your testimony, you
5 participated in one of the first workshops in the first
6 cost docket in 1997, but you have not testified here in
7 Washington since then?

8 A. That's correct.

9 Q. Did you, well, let's see, did you undertake
10 any activity to familiarize yourself with the history of
11 this docket in Washington prior to testifying here
12 today?

13 A. Yes.

14 Q. And can you tell me generally what you did in
15 that regard.

16 A. Generally I focused my attention on documents
17 specifically related to this portion or segment of this
18 particular docket, in other words Part D, by reviewing
19 the testimony of various parties and some, quite a bit
20 of the discovery responses to Covad.

21 Q. Did you review any part of the Part B record
22 in this docket?

23 A. No.

24 Q. Did you review Qwest's voluminous response to
25 Covad's Data Request Number 60, which is the

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1 information, the field notes and logs that I discussed
2 with Dr. Cabe on the testing associated with the loop
3 provisioning?

4 A. Yes, I did some review of that. I would
5 classify it as a cursory review, and I believe I may
6 have had one or two conversations with Mr. Cabe to help
7 him understand some of the abbreviations and acronyms.

8 Q. Okay, thank you. Are you familiar with the
9 docket that is open here in Washington for consideration
10 of Qwest's statement of generally available terms and
11 conditions in connection with the 271 proceeding?

12 A. No.

13 Q. Are you familiar with or are you aware of
14 whether or not the Commission has ruled in that
15 proceeding or any other proceeding in Washington about
16 the terms and conditions under which Qwest is required
17 to offer unbundled packet switching?

18 A. I don't believe so, no. Unless there was
19 testimony in this particular Part D, no.

20 Q. Now turn to page 8 of your testimony, please.

21 A. Okay.

22 Q. You have a sentence there in the middle of
23 that answer that is perhaps more general than you
24 intended, and I don't know that, and that's what I want
25 to clarify with you. You state there generally copper

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1 T1 lines are not considered forward looking technology
2 by anyone in the industry. Do you see that?

3 A. Yes.

4 Q. Do you mean that statement as generally as
5 you have stated it there, or do you mean to limit it to
6 the context of the discussion that you're having there,
7 which is a feed to a remote terminal and a remotely
8 located DSLAM?

9 A. I'm not sure whether that was a yes or a no,
10 but in any case, I would like to explain and answer your
11 question as best I can and as short as I can. Frankly,
12 I was confused up until fairly recently, which I think
13 shed light on this, to say yes, it's more focused, my
14 criticism is more focused, and I think it would be
15 helpful if I explained why I was confused.

16 Through this particular proceeding, Qwest has
17 used the term RT in a framework or in a way that I'm not
18 used to defining it as as one skilled in the art, and as
19 a matter of fact, Qwest kind of supports -- Qwest
20 supports that with an ex parte filing that they made
21 before the FCC in CC Docket 96-9898-147 on May 31st,
22 2000. This is a publicly available document. And there
23 Qwest, U S West at the time, clarified for the FCC what
24 could be confused, and it was a page marked what is
25 meant by the term remote terminal, that there are many

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1 different types of cabinets in the outside plant network
2 such as DLC, remote terminal cabinets, feeder
3 distribution interface cabinets, service terminal
4 cabinets, and more. Many of these are referred to as
5 remote terminals.

6 The standard industry use of the term refers
7 to the cabinet on the field side of a DLC system, the
8 DLC remote terminal. And what's become more clear to me
9 is that many times in this proceeding Qwest has referred
10 to I believe what I would more properly classify as a
11 remote DSLAM as being an RT.

12 So my criticism here and the reason why I
13 focused on T1's, copper T1's being used to serve DLC
14 remote terminals, was with the general understanding
15 that every time Qwest said RT, they were talking about a
16 remote terminal digital loop carrier. It is true that
17 there is some deployment of T1's on copper, but there
18 are two kinds of T1's. There is the traditional T1,
19 which, on copper, which has existed since the mid 1950's
20 and which requires normally troublesome repeaters every
21 5,000 feet and a new technology, newer technology,
22 called HDSL, which can be used for lines of T1 over
23 copper up to 12,000 feet. It can't go beyond 12,000
24 feet without the use of an HDSL repeater, and you can
25 only use one of those, and then that will extend it out

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1 another 12,000 feet.

2 The other reason why I think it's important
3 to understand this copper fed technology is that first
4 of all, there are at least two -- there are actually
5 three different types of loop. There's the all copper
6 loop of less than 18,000 feet, and that's copper Covad
7 buys then. Then there's the loops that are longer than
8 18,000 feet, and I believe even in its recurring case,
9 Qwest has said the forward looking technology there is
10 fiber fed DLC. Then there are the embedded loops where
11 copper is longer than that. It's not forward looking,
12 it's antiquated copper loops.

13 But I believe when Qwest has said RT fed by
14 T1, copper T1's, they're referring to those extra long
15 loops that are in the embedded network that are not
16 served on the forward looking fiber fed digital loop
17 carrier, and now Qwest is saying that they're going to
18 put a remote DSLAM out there and connect that back to
19 the central office over copper T1. So that's now my
20 understanding of where that is.

21 My understanding is that this case is limited
22 to costing that functionality, and regardless of whether
23 it's on antiquated copper T1's, I think the correct
24 costing principle is based on the forward looking
25 network so that there's either a copper loop no longer

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1 than 18,000 feet, or it's a fiber fed DLC loop for
2 anything longer than that. And so having expensive
3 copper fed RTs, which I prefer to call remote DSLAMs,
4 that that cost is really not the right cost.

5 Q. And you're aware that Dr. Cabe removed from
6 his testimony that criticism of Qwest's unbundled packet
7 switching cost study or remote terminal cost study?

8 A. Yes.

9 Q. Okay. Let me ask you about the testimony
10 that you give on page 9. You cite there to a recent
11 market research report by RHK. When you say recent,
12 when was that market research report issued?

13 A. Subject to check, I believe it was 2000.

14 Q. Do you know by whom it was commissioned?

15 A. No. RHK is an independent market research
16 firm that sells its reports to the industry, and it's
17 been widely published in the Wall Street Journal. It's
18 a very well known telecommunications market research
19 tracking firm.

20 Q. Was this particular report published in the
21 Wall Street Journal to your knowledge, or did you obtain
22 it some other way?

23 A. I obtained it -- this particular report was
24 an industry report that they sold.

25 Q. And that's how you obtained it?

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1 A. One of my clients purchased it.

2 Q. Who was that?

3 A. That was AT&T. I subsequently spoke to the
4 marketing representative and gained permission to use
5 the quotations that I use here.

6 Q. Okay. Now in the question and answer above
7 that, above that reference to RHK, the last sentence
8 discusses the integrated DLC DSLAM as the forward
9 looking cost effective technology; is that correct?

10 A. Yes, that's correct.

11 Q. And you're not here to present investment
12 costs for that technology, are you?

13 A. No, I'm not. We're hoping to seek more
14 detailed investment information from Qwest, but we were
15 only given certain limited amounts of that. I generally
16 know the costs of that, but any of that knowledge is
17 gained from personal involvement in proceedings in which
18 those costs were considered confidential.

19 Q. Okay. And you have not presented a cost
20 study or analysis in your testimony where we could
21 review those costs?

22 A. No, I have not.

23 Q. Okay. Let's look at page 11 of your
24 testimony, and there you refer to JCD-2, which is I
25 believe now 2372; do you have that?

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1 A. Yes, I do.

2 Q. Can you identify that document; is that a
3 press release?

4 A. Yes, it is.

5 Q. Okay. And was that issued by Alcatel to your
6 knowledge?

7 A. I'm just checking to see if it was jointly
8 issued or if other companies are named. I believe it
9 was issued by Alcatel, but if they name other companies,
10 without going through this in detail, if they do name
11 any other companies, then it's normally considered a
12 joint release because it has to be cleared with anyone
13 they mention.

14 Q. So it might have been a joint release with
15 RHK?

16 A. I see their name mentioned. I also see other
17 companies mentioned. But I'm not sure because of the
18 general nature. They say Alcatel on the second page
19 2.2, Alcatel ADSL equipment is being actively deployed
20 by Bell Atlantic, SBC, BellSouth outside the United
21 States and so forth and so on. I have seen other press
22 releases since then in which they claim they also sell
23 their equipment to Qwest Communications.

24 Q. And going on to Exhibit 2373.

25 A. I'm sorry, I don't have those numbers.

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1 Q. Oh, JCD-3.

2 A. Yes.

3 Q. What is this document?

4 A. This is a document that I obtained from
5 Alcatel's Web site in which they have a description of
6 how their equipment for ADSL, for digital loop carrier,
7 can readily handle ADSL as well as POTS within the same
8 basic unit of a Light Span 2000 that has been around
9 since I believe 1992, thereabouts, that those systems
10 can be outfitted by putting in a couple of cards, and
11 that then allows them to serve both POTS and ADSL.

12 Q. Now this is not a technical data sheet for
13 any of the equipment named in this document, is it?

14 A. Well, it has a link to a data sheet, but this
15 particular one is the general sheet. And at the bottom
16 you will see it refers to the data sheets for both the
17 2000 and the 2012 systems.

18 Q. And this is not a price list for that
19 product, is it?

20 A. No, one can, at the Web site, can click on
21 those and view those also.

22 Q. Now looking at that document in more detail,
23 the end of the first paragraph and the beginning of the
24 second paragraph, that information contained there
25 indicates that upgrades to an existing network to

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1 include this equipment would be necessary; is that
2 right?

3 A. I'm not sure from -- if the word upgrade is
4 technically correct.

5 Q. Additions?

6 A. I think they're specifically saying that it
7 requires a minimum of software release 10.1. In the
8 exhibit right after that they indicate that they're well
9 into software release 11. So similar to like a Windows
10 platform, they're saying you have to have at least
11 Windows 98, they're saying you have to have at least
12 release 10.1 and that it requires an ATM bank control
13 unit. And actually there are two cards, they are
14 redundant, one is a backup. So it requires the
15 insertion of two cards and, of course, individual line
16 cards, but you need that in a DLC system in any case. I
17 think the most important point is you can complete --
18 you can change out the -- this architecture by simply
19 having up to date software releases and putting in two
20 bank control units.

21 Q. So what you're saying is that it would not
22 require a cabinet changeout?

23 A. Absolutely not, and that's the important
24 point that I'm trying to make here is rather than having
25 a different concrete, a separate concrete pad, a

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1 separate steel cabinet, a separate power supply or power
2 hook up from the power company, without having all of
3 that, what you do is you replace two common cards and
4 then as many line cards as you need to provide as many
5 services as you need. It's just a -- it is a much more
6 cost effective way of doing it primarily because you
7 don't have to start all over with the common costs of
8 the concrete pad and the cabinet and the whole common
9 unit.

10 Q. The next document that you have attached to
11 your testimony, JCD-4 or 2374, is that a product
12 brochure?

13 A. I think it would be fairly characterized that
14 way. I drew it down from the Internet site, but it
15 certainly looks like -- the original is in color, and it
16 sure looks like a product brochure to me. But it does
17 have a lot of technical information that's typical of
18 high tech telecommunications networks.

19 Q. All right. And on the fourth page there,
20 there is a list of additional sources for technical data
21 and product descriptions; is that right?

22 A. I'm not sure whether you count the first one.
23 Is that the one with the eyeball on it, or is it the one
24 with the picture of the earth on it?

25 Q. Page 4 has got a little tiny 4 in the lower

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1 left-hand corner.

2 A. Oh, okay, yes.

3 Q. And so is that additional information that is
4 more technical and more detailed that's available
5 through each of those publications?

6 A. I would presume so.

7 Q. Okay. And what's the last page?

8 A. Page 5 or the --

9 Q. Yeah.

10 A. The last page was the back sheet with their
11 logo on it.

12 Q. Actually, page 5 is my last page. And not to
13 unduly limit you, certainly you can give a complete
14 answer, but I would prefer the short answer on the
15 description of page 5.

16 A. So would I. I think I can summarize this by
17 saying this is the manufacturer's attempt to impart a
18 feeling that this is the most widely flexible platform
19 for providing advanced services that could be deployed
20 by an ILEC, that it can be done in a scaler fashion, so
21 you can spend as little as you want or as much as you
22 want, and you really only have to pay for about as much
23 as you need without tearing everything down and building
24 it over again. If that's a sufficiently detailed
25 answer, I'm satisfied with it.

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1 Q. Thank you. On page 14 of your testimony,
2 which is where you discuss the exhibit we were just
3 talking about, at the bottom of the page there, you say,
4 no rational person would place separate sets of common
5 equipment at a remote terminal location. If there were
6 already a set of common equipment at a remote terminal
7 location for POTS and the addition of an additional set
8 of common equipment for XDSL were the most cost
9 effective solution, why wouldn't a rational person do
10 that under those circumstances?

11 A. I think I understand your question. I think
12 it's similar to the statement I make on page 12 where I
13 allude to the original digital loop carrier, so to
14 speak, called Slick 96, which has been manufacture
15 discontinued since 1992, but there's still an embedded
16 base of that equipment out there, and that equipment can
17 not be upgraded by putting in two bank control cards,
18 which I advocate here by describing the Alcatel
19 equipment, which is one vendor, there are several
20 others, that you just can't do that with a Slick 96.

21 Then I think that -- I believe that's similar
22 to the example that you're giving me, and my response to
23 that would be that there might -- it might be less
24 expensive to put together some kind of a temporary fix,
25 but if I were -- if I were looking at a clean sheet of

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1 paper and I were laying it out using forward looking
2 technology, then I would -- I would base it on the most
3 cost effective solution, which would be not to have two
4 separate cabinets standing there.

5 And I also say in my testimony, and I'm not
6 saying that Qwest should be ordered to change out old
7 depreciated equipment, there's certainly -- they can do
8 -- they can have in place whatever they have, but we're
9 talking here about the cost, and I believe the cost
10 should be on a clean sheet of paper, what's the most
11 cost effective way to do it, and there's no question in
12 my mind that an engineer would design a combination
13 system.

14 Q. So you're not in your testimony attempting to
15 drive a different type of deployment in, excuse the
16 expression, in real life; in other words, you're not
17 attempting to -- you're not asking the Commission to
18 order Qwest to deploy equipment differently from how
19 it's deploying it, but rather only suggesting that the
20 costing methodology ought to be in accordance with what
21 you were recommending?

22 A. Could you repeat that question?

23 Q. I don't think so. Well, I was trying to
24 break it into small pieces, but then it seemed like a
25 more complete question longer. I'm trying to clarify

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1 that your recommendations here, and you may have already
2 done this, but that your recommendations are limited to
3 what types of equipment Qwest should assume for purposes
4 of costing and pricing these products and services, not
5 what types of equipment Qwest should actually be
6 deploying in its network?

7 A. That's correct.

8 MS. ANDERL: That's all I have, thank you.

9 JUDGE BERG: All right.

10 Ms. Tennyson.

11 MS. TENNYSON: Thank you.

12

13 C R O S S - E X A M I N A T I O N

14 BY MS. TENNYSON:

15 Q. Good afternoon, Mr. Donovan.

16 A. Good afternoon.

17 Q. Ms. Anderl had asked you about a line in your
18 testimony at page 8 where you state that copper T1's are
19 not considered forward looking technology. Is that
20 because copper T1's are prone to errors whereas a
21 properly installed fiber fed T1 would not be error
22 prone?

23 A. Generally speaking, yes. Fiber cable is more
24 reliable because water doesn't damage it and it damages
25 copper. It breaks less frequently, there's no question

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1 about it. Repeaters are points of weakness in the
2 network, and I think it's well known in the industry and
3 there's quite a bit of statistics on the FCC's ARMIS
4 data base that fiber based systems are a tiny fraction
5 of the maintenance costs of copper based systems. So
6 yes, there are many reasons.

7 You used the word error, to me, error in T1's
8 technically means byte error rates and things that we
9 don't want to go there. But they break more often,
10 they're not as reliable, and the customer doesn't get as
11 good of service.

12 But in any case, it's been determined that
13 for the longer loops and in the way that we're using
14 remote DSLAMs here, you would only use them for those
15 really long loops. It's already been pre -- it's
16 already been decided that fiber fed DLC, you know, is
17 the right way to go, not using some other form of T1.

18 Q. Okay. There were some questions of Mr. Cabe
19 about testing and forms of doing testings, and there
20 were -- there was a question that he had actually
21 referred to you, but I wanted to just sort of branch off
22 of one of Ms. Anderl's questions. There was reference
23 to a loop back test; are you familiar with that term?

24 A. Yes, I'm familiar with several uses of that
25 term.

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1 Q. Okay.

2 A. Quite frankly, and maybe I could, you know,
3 explain it.

4 Q. That would be helpful.

5 A. I think it would be most instructive, and I
6 will really keep this concise, but I think it helps if I
7 describe what has been done over the course of the last
8 30 years on a POTS dial tone line and how I think
9 there's a direct parallel to what we're preaching here,
10 so to speak.

11 Q. All right.

12 A. For a long time on a regular POTS line, a
13 customer orders service, the night before the frame
14 technician lays in the cross connection between the
15 switch that provides the dial tone and the MDF, the main
16 distribution frame. In the morning, usually before the
17 technician comes in, the test can be run in what's
18 called MLT, mechanized line testing, and someone sitting
19 in Denver could trigger the switch here to perform that
20 test, because it's a remote type testing. So it tests
21 that to see if there's anything obviously wrong, but
22 then the technician goes out into the field to the
23 customer's home and looks for dial tone, may do some
24 tests, can actually dial in themselves with a hand held
25 terminal and get the MLT to do the test and work with

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1 them. That way it doesn't require the frame technician
2 to stand by all the time.

3 The parallel here is that the normal sequence
4 of events would be for Qwest to lay in the cross
5 connection at the ICDF so that the Covad equipment, in
6 effect their switch, it's a data switch, it's a DSLAM,
7 but it's a switch, that it's hooked up there first, and
8 then the loop is tested. And there are different ways
9 of doing that. What we're saying here or what I'm
10 saying is that it's very cost effective to do testing
11 that way, and to charge Covad extra for it doesn't seem
12 to really make sense to me at all. The alternative is
13 for this technician to go out in the field and to go up
14 on the line, and of course in this case you can't hear
15 dial tone because it's a data circuit so, but in any
16 case, he or she would go out there to the field, try to
17 do some tests, but then would call up the central office
18 frame dispatch to let them know, I need to test with a
19 frame technician. Then the frame technician comes,
20 finally comes on the line, and they're all talking
21 together, and the frame technician puts the meter up,
22 and the field technician is out there, and so the frame
23 technician says, give me a short. And that means he
24 sticks a screwdriver between the two lug nuts. And he
25 says, I see your short. That's important because it

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1 means there's continuity all the way back, all the way
2 out and all the way back without any broken wires,
3 without any broken cross connections.

4 Now in the data responses, matter of fact the
5 one I think just before Dr. Cabe came off the witness
6 stand, related to the different tests that are performed
7 by Qwest, and Qwest claims to perform a test to ensure
8 that there are no opens. Well, putting this short in
9 the field is the most basic form of loop back test there
10 is, and when Covad is requesting a loop back test, that
11 it's my understanding all Covad wants is, I see your
12 short so I know it goes all the way out there and they
13 have tested for the open.

14 Because what happens in fact is most of the
15 problems that are being encountered are incomplete cross
16 connections along the way. We heard Dr. Cabe talk about
17 the heat coil, the fuse. Well, actually, that couldn't
18 have happened if the test was done from the ICDF,
19 because the ICDF is cabled to the main frame where this
20 heat coil is, and then that goes out to the field. So
21 if that test was done end to end, then they would have
22 found out that somebody took the heat coil out in the
23 middle. So there's a case where somebody -- I don't see
24 how they could have done the test as they claim to have
25 done from frame to NID and not have seen that open.

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1 So it's those kinds of problems time and time
2 again that has Covad concerned. They're willing to do
3 cooperative testing, and I think you can understand in
4 my parallel with the way things were done in the POTS
5 world why it's just not a strange way to build out a
6 loop.

7 MS. TENNYSON: Okay, thank you, I have
8 nothing further.

9

10 E X A M I N A T I O N

11 BY JUDGE BERG:

12 Q. Mr. Donovan, in a small room, I couldn't help
13 but notice you were here while Dr. Cabe was on the
14 stand. Do you recall a series of questions that I posed
15 to Dr. Cabe regarding ongoing testing of data
16 connections?

17 A. Yes, I do.

18 Q. And I will just kind of generally cover the
19 whole range of the question and then give you a little
20 range to answer it as well. And it dealt with a
21 situation where if you accept that Qwest provides data
22 connections on a regular basis to its customers, and
23 that part of a data line is that Qwest in servicing in
24 its own customers would provide or perform ongoing
25 testing, would then be a question of what kind of tests

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1 are relevant on an ongoing basis, and then if Qwest was
2 providing those tests to itself, wouldn't it do the same
3 for Covad. And I think I understand what Dr. Cabe was
4 saying about the advantage of being able to perform a
5 mechanized test as the direct consequence of where the
6 line terminates or where it's connected. But certainly
7 if there's something else about that that needs
8 amplification, you could also comment on that.

9 A. Certainly, I would be happy to. And by
10 ongoing testing, normally ongoing testing occurs because
11 a customer calls up and says, you know, I can't connect
12 to the Internet. I think is that the example you're
13 talking about, and so a test needs to be done to find
14 out what's wrong?

15 Q. Well, it would be even broader than that,
16 whether or not in certain circumstances a carrier would
17 routinely perform ongoing tests of its own or whether
18 those tests include testing that's done as a result of a
19 trouble report.

20 A. Okay. Generally speaking, and the simplest
21 example is a POTS line, that I believe every ILEC has
22 used something called automatic line installation test,
23 ALIT, all capitals, and they have done that for as long
24 as they have had MLT, 30 years. And at night, normally
25 between 2:00 and 6:00 a.m., the switch will trigger a

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1 set of sequential tests of all the lines in an attempt
2 to do preventative maintenance to see if any lines show
3 up as defective on a proactive basis.

4 For the most part, unless you're talking
5 about extremely high speed data lines, that kind of
6 proactive testing is not done on data lines for fear
7 that the attempt to do that test may cause a hit on the
8 data line and the loss of data, and it could be a bank
9 transmitting, you know, deposit information and so
10 forth. So they generally don't try to do that without
11 the customer's knowledge on a proactive preventative
12 maintenance basis.

13 So for data lines, it's usually done because
14 a customer calls up and says, I don't think it's not
15 really working at the right speed or I'm dropping the
16 line or I'm having trouble with the Internet. When that
17 happens, then. In the case of a Qwest customer, then
18 the Qwest testing facility will use some form of remote
19 testing capability similar to MLT where they have more
20 sophisticated ones for their data testing.

21 In the case of a Covad customer complaining
22 that something's not quite right, and both from speaking
23 with technical people at Covad as well as actually
24 having a Covad line myself and having it go down,
25 although in a different part of the country, by the way

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1 it wasn't Covad's fault, but the first thing that
2 happens is that Covad's testing facility asks or sends
3 an E-mail or contacts the customer and says, please call
4 my 800 number, which I did, and they said, okay, unplug
5 everything from your modem now, turn it off, turn it on,
6 what do you see on the lights. And the Covad technician
7 says, I see your modem, you know, it's clear from there,
8 or I'm seeing a crossed battery or a short circuit or
9 there's something wrong with the loop.

10 Now what happens after that is they generally
11 call, in this area, they would call Qwest and say, I
12 have a trouble report, and they then go into a form of
13 cooperative testing. What usually happens is the first
14 thing that's done is that a technician in the Qwest
15 central office will get on line with the Covad tester
16 and basically put a short on the pair, I see your short,
17 it's good until the main frame or it's good until the
18 ICDF and it's good up to here, it must be outdoors.

19 And then so usually sometime after that, they
20 dispatch a technician out to the field. And once again
21 at that point in time, Qwest can either tear open the
22 cross connection in the central office and work one on
23 one, or it can use the remote testing facility that
24 Covad can do until they get all the way out there to the
25 point where the Qwest technician is just about looking

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1 at the flashing lights on the modem and they find out
2 where is the problem. And if it's Qwest's problem, then
3 they will fix the loop or they'll change the loop to
4 another facility that is not broken.

5 Q. Thank you.

6 A. You're welcome.

7 Q. And just as sort of another informational
8 question, what is it you see when there's a short, is
9 there a drop off in the current?

10 A. There's a meter which is called a home meter,
11 and it actually usually has a little double A battery in
12 it, and it sends it out, and the meter just deflects to
13 show all of a sudden as the short is put on, the meter
14 just pegs over to one side. And when it's taken off, it
15 shows clean and open. So it's really a -- it sees if
16 that 1 1/2 volt battery voltage goes all the way out,
17 comes all the way back. It's a very simple test.

18 JUDGE BERG: All right, thank you.

19 Ms. Anderl, parallel to what we did with
20 Dr. Cabe, if you have other cross-exam questions at this
21 time, maybe you would pose those before we proceed to
22 redirect.

23 MS. ANDERL: I do not.

24 JUDGE BERG: All right.

25 MS. ANDERL: I'm interested in some things he

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1 said, but they're not cross questions.

2 JUDGE BERG: All right. Well, maybe you will
3 have a chance after redirect.

4 Ms. Doberneck.

5 MS. DOBERNECK: Thank you. I have two
6 questions and potentially a follow-up question or two.

7

8 R E D I R E C T E X A M I N A T I O N

9 BY MS. DOBERNECK:

10 Q. Mr. Donovan, in response to one of
11 Ms. Anderl's questions, you used the phrase that you can
12 change out the architecture with two cards in connection
13 with the Alcatel product. When you use the phrase
14 change out, what do you mean?

15 A. By change out I mean unlatch and pull out a
16 small printed circuit board card that's about, oh, maybe
17 15 inches long and about 8 inches high, and pull that
18 out of a slot and slide the other one into the slot and
19 click it home, and then the card sequences and goes into
20 a self test mode, and then the green light lights after
21 about 45 seconds. It's self tested, the system
22 recognizes it's there, and knows that it changes its
23 architecture.

24 Q. For a lay person who is not as technically
25 sophisticated as you, could I analogize it, for example,

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1 to putting a disk in my CD player? I mean is it as
2 simple as that, or is it more complicated? I'm trying
3 to get a --

4 A. Well, a CD player, the door closes all by
5 itself, but it's kind of like putting a Nintendo
6 cartridge in a Nintendo game machine.

7 Q. Okay, great. My other question, Ms. Anderl
8 had a few questions for you about your testimony at page
9 9 regarding the integrated DLC DSLAM.

10 A. Yes.

11 Q. And when we're talking about an integrated
12 DLC DSLAM, are you referring to NGDLC, which is next
13 generation digital loop carrier?

14 A. Yes, I am generally. Actually NGDLC was a
15 marketing phrase coined by Alcatel back around 1992. I
16 wondered what they were going to call the next one, and
17 apparently in my Exhibit 4 they have come up with I
18 think new world digital loop carrier. But yes, I'm
19 generally talking about NGDLC.

20 Q. You also stated in response to one of
21 Ms. Anderl's questions that you had knowledge from
22 participation in a proceeding involving NGDLC regarding
23 the investment costs for that particular type of
24 equipment; is that correct?

25 A. Yes.

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1 Q. And I understand you also said it was
2 confidential, so please don't disclose anything. Do you
3 have knowledge of what Qwest has said its costs per
4 subscriber is for its remote DSLAM deployment?

5 A. Yes, actually, I had to kind of take a couple
6 of things together in order to calculate what it is. In
7 that ex parte filing that I mentioned before that was
8 filed before the FCC, they indicate, and it may also be
9 a number filed here, I'm not sure, but they say that the
10 distribution area is generally 150 to 200 living units.
11 And so if I take the mid point and say it's 175 per
12 remote DSLAM, and the Weidenbach affidavit indicates --
13 I'm not sure whether the investment number is
14 proprietary.

15 MS. ANDERL: (Shaking head.)

16 A. The \$90,000 investment per DSLAM including
17 construction, that comes out to \$514 per subscriber.
18 And I believe that's because the remote DSLAMs are not
19 located near the digital loop carrier remote terminal.
20 They're out by the FDI, and so you end up with tinier
21 universes to serve. In contrast, SBC has said in its
22 investor briefing that they have an average of 700
23 subscribers per remote terminal, in this case, they do
24 mean DLC remote terminal, using this NGDLC technology,
25 and that their average cost is \$86,000 for both

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1 upgrading and adding, which is very similar to the
2 \$90,000, but when you divide the \$86,000 by 700, you get
3 \$123 per subscriber versus \$514 per subscriber because
4 they have concentrated and used the more cost efficient
5 technology.

6 MS. DOBERNECK: And for purposes of the
7 record, Ms. Weidenbach's affidavit is Exhibit 2080.

8 I have no further questions. Thank you very
9 much, Mr. Donovan.

10 MS. ANDERL: Nothing else.

11 JUDGE BERG: All right.

12 All right, Mr. Donovan, thank you very much
13 for your patience and for appearing here. You're
14 excused from the witness stand and from the proceeding
15 at this point.

16 THE WITNESS: Thank you very much, Your
17 Honor.

18 JUDGE BERG: You're welcome, sir.

19 Let's be off the record.

20 (Discussion off the record.)

21 (Hearing adjourned at 3:20 p.m.)

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